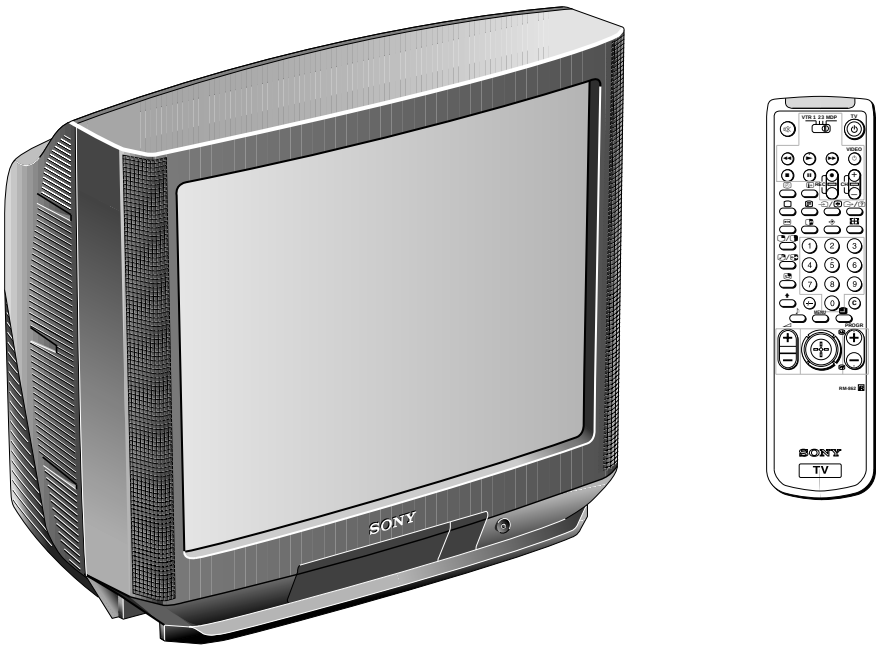
SERVICE MANUAL

AE-4 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-29K1A	RM-862	Italian	SCC-K43G-A
KV-29K1B	RM-862	French	SCC-K45G-A
KV-29K1D	RM-862	AEP	SCC-K41G-A
KV-29K1E	RM-862	Spanish	SCC-K42G-A
KV-29K1K	RM-862	OIRT	SCC-K44G-A
KV-29K1R	RM-862	Russian	SCC-K44H-A
KV-29K1U	RM-862	UK	SCC-K46C-A



MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H, DK	ITALIA VHF:A-H2 (C) UHF:21-69 PAL B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):201-S05, M1-M10, U1-U10 D/K VHF:R01-R12 UHF:R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
French	B/G/H, D/K, L, I	L VHF:F02-F10 UHF:F21-F60 CABLE:B-Q B/G/H VHF:E2-E12 UHF:E21-E69 CABLE TV (1):S1-S41 CABLE TV (2):S01-S05, M1-M10, U1-U10 ITALIA VHF:A-H2 (C) UHF:21-69 I UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
AEP	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H2 (C) UHF:21-69 D/K VHF: R01-R20 UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
Spanish	B/G/H, D/K	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H2 (C) UHF:21-69 D/K VHF: R01-R20 UHF: B21-B69	PAL, SECAM NTSC3.58/4.43 (video input only)
OIRT	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 D/K VHF: R01-R12 UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
RUSSIAN	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 D/K VHF: R01-R12 UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
UK	I	UHF 21-69	PAL NTSC3.58/4.43 (video input only)

MODEL	29K1A	29K1B	29K1D	29K1K	29K1R	29K1E	29F3U
Power consumption	122W	138W	138W	138W	138W	138W	210W

SPECIFICATIONS

Picture Tube — Super Trinitron
Approx. 72 cm (29 inches)
(Approx. 68 cm picture measured diagonally) 100˚ deflection

Rear/Front Terminals

[REAR]

- 21-pin Euro connector (CENELEC standard)
  - Inputs for audio and video signals
  - Inputs for RGB
  - Outputs of TV video and radio signals
- 2/ S 2 21-pin Euro connector
  - Inputs for audio and video signals
  - Inputs for audio and video signals (selectable)
- 2 Audio outputs - phono jacks

[FRONT]

- 3 Video input - phono jack
- 3 Audio inputs - phono jacks
- 3 S video input - 4 pin DIN
- Headphone jack - stereo minijack

Sound output	30Wx2 (music power) 15Wx2 (RMS)
Dimensions	680X582X536mm approx.
Weight	Approx. 50kg
Supplied accessories	RM-862 Remote Commander (1) R6 batteries (2)
Other features	TELETEXT , Fasttext FLOF/TOP text, NICAM (KV-29K1B/29K1E/29K1U ony)

[RM-862]

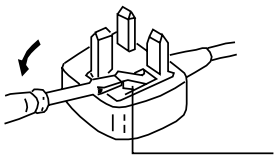
Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x56x24 mm (w/h/d)
Weight	Approx. 110g (Not including battery)

Design and specifications are subject to change without notice.

Model name / Item	KV-29K1A	KV-29K1B	KV-29K1D	KV-29K1E	KV-29K1K	KV-29K1R	KV-29K1U
Digital Comb Filter	ON	ON	ON	ON	ON	ON	ON
Digital Noise Reduction	ON	ON	ON	ON	ON	ON	ON
PIP	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MPIP	ON	ON	ON	ON	ON	ON	ON
Picture & Picture	ON	ON	ON	ON	ON	ON	ON
Rotation Coil	ON	ON	ON	ON	ON	ON	ON
Clipboard	ON	ON	ON	ON	ON	ON	ON
Auto 16:9 (Line 23)	OFF	OFF	OFF	OFF	OFF	OFF	OFF
TXT	ON	ON	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON	ON	ON
Language Preset	Italian	French	German	Spanish	OIRT	OIRT	English

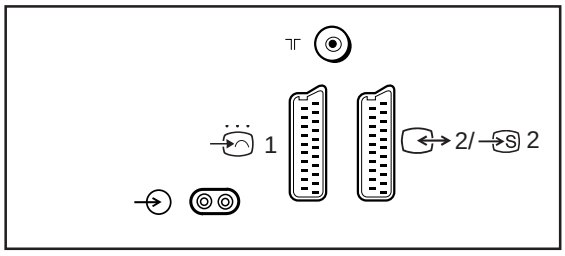
WARNING (KV-29K1U only)

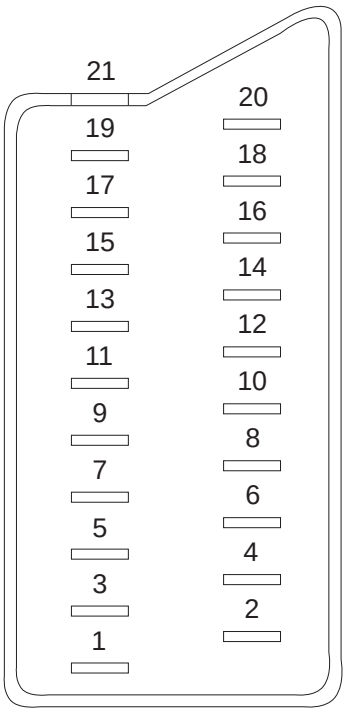
The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ASTA mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.
IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.
THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.
Open the fuse compartment with the screwdriver blade and replace the fuse.

21 pin connector (1, 2/ S 2)





Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) croma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	—	—	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.

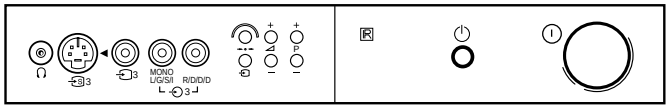


TABLE OF CONTENTS

Section	Title	Page
1. GENERAL		
	Overview	7
	Basic Operation	8
	Advanced Operation	9
	Teletext	13
	Optional Equipment	15
	Additional Information	16
2. DISASSEMBLY		
2-1.	Rear Cover Removal	17
2-2.	Chassis Assy Removal	17
2-3.	Service Position	17
2-4.	G Board Removal	17
2-5.	A Board Removal	18
2-6.	Picture Tube Removal	18
	Removal and Replacement of the Main-Bracket Bottom Paltes	19
3. SET-UP ADJUSTMENTS		
3-1.	Beam Landing	20
3-2.	Convergence	21
3-3.	Focus	23
3-4.	Screen (G2), White Balance (Adjustment in the service mode with remote commaner	23
4. CIRCUIT ADJUSTMENTS		
4-1.	Electrical Adjustments	24
4-2.	Volume Electrical Adjustments	28
4-3.	Test Mode 2:	29
5. DIAGRAMS		
5-1.	Block Diagram (1)	31
	Block Diagram (2)	33
	Block Diagram (3)	35
	Block Diagram (4)	39
	Block Diagram (5)	41
5-2.	Circuit Boards Location	
5-3.	Schematic Diagrams and Printed Wiring Boards	44
	*A Board	49
	*C Board	57
	*T Board	61
	*B Board	67
	*G Board	75
	*D Board	80
	*VM Board	85
5-4.	Semiconductors	87
5-5.	IC Blocks	90
6. EXPLODED VIEWS		
6-1.	Chassis	91
6-2.	Picture Tube	92
7. ELECTRICAL PARTS LIST		93

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

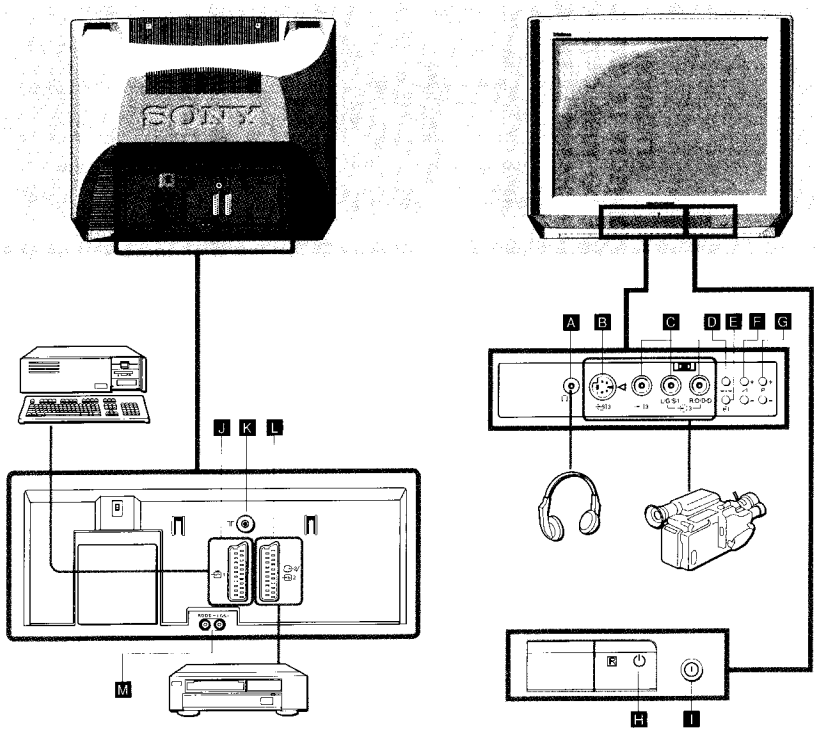
SAFETY-RELATED COMPONENT WARNING!!

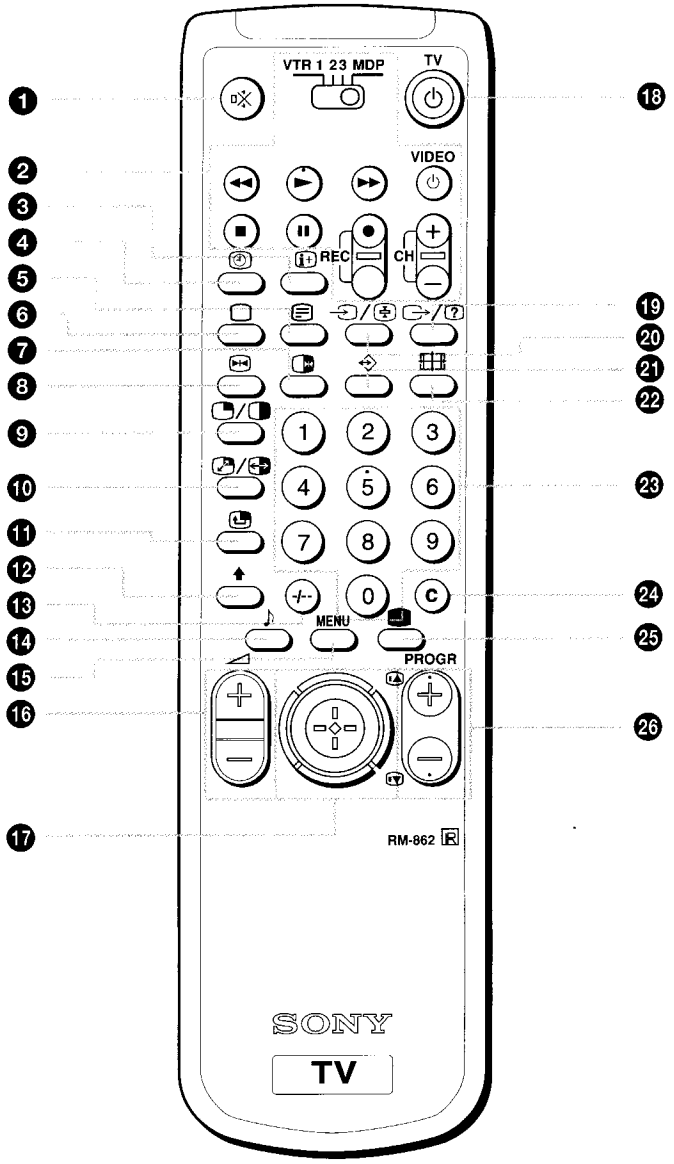
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

The operating instructions mentioned here are partial abstracts from the Operating Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



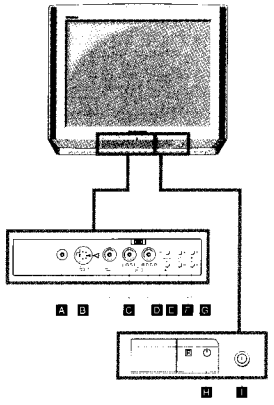


Overview

This section briefly describes the buttons and controls on the TV set and on the Remote Commander. Please open the flaps at the front and at the back of the Instruction Manual for detailed illustrations of the Remote Commander and the TV set. Letters in boxes refer to the buttons and connectors on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the pages given next to each description.

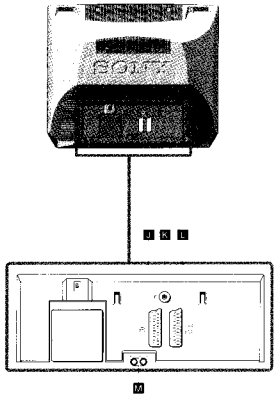
TV set – front

Reference and Symbol	Name	Refer to page
A	Headphones jack	11
B	S video input jack 3	18
C	Input jacks (video, audio) 3, 3	18
D	Reset button	6
E	Input mode button	6
F	+/-	Volume control	6
G	P +/-	Programme buttons	6
H	Standby mode indicator	6
I	Main power switch	6



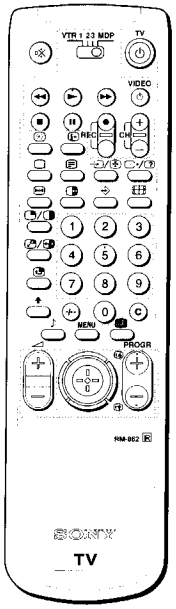
TV set – rear

Reference and Symbol	Name	Refer to page
J	1	21-pin Euro connector	18
K	Aerial socket	4
L	2/2	21-pin Euro connector	18
M	R/D/D/D L/G/S/F	Audio phono jacks	18



Remote Commander

Reference and Symbol	Name	Refer to page
1	Muting on/off button	6
2	**VCR operation**	19
	VTR 123 MDP	Video equipment selector	19
	◄◄ ► ►► ■ II ●	Video equipment operation buttons	19
	VIDEO ⏻, CH +/-	
3	On-screen display button	6
4	Time display button	6
5	Teletext button	6, 15
6	TV power on/TV mode button	6
7	PAP freeze button	14
8	Freeze button	6
9	PAP on/off button	14
10	PAP Swap button	14
11	No function on this set	
12	PAP source selector	14
13	- / - -	Double digit entering button	6
14	♪	Sound mode button	11
15	MENU	Menu on/off button	7
16	+/-	Volume control buttons	6
17		Joystick for Menu selection	7
		Press to confirm selection (OK function)	
18	TV ⏻	TV standby button	6
19		Output mode selector	18
		Teletext: Reveal button	15
20		Input mode selector	6
		Teletext: Freezing the subpage	15
21		Teletext: Favourite pages button	17
22		Screen format button	6
23	1, 2, ... 9, 0	Number buttons	6
24	C	Direct channel entering button	6
25		Picture mode button	11
26	PROGR +/-	Programme buttons	6
		Teletext: Page up/page down buttons	15

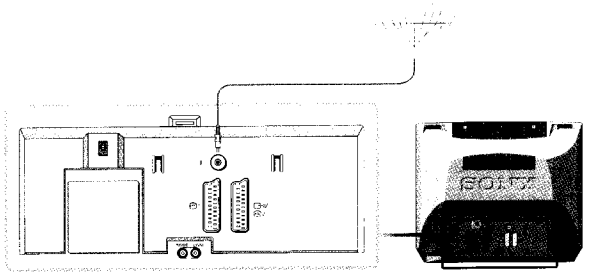


Basic Operation

Step 1 Installation

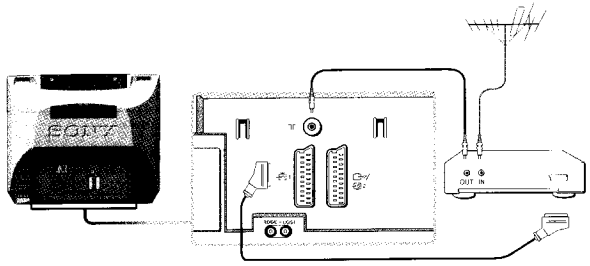
A Connecting the Aerial

(If you connect a VCR, skip to step B)
Insert the aerial plug of the supplied aerial cable tightly into the aerial socket ⊤ K.



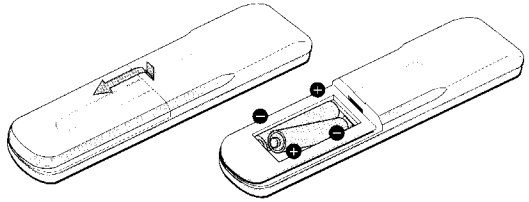
B Connecting a VCR

We recommend that you tune in the VCR signal to the programme position »0«.
Use the preset function »Manual Programme Preset« (page 7) to do this.



C Inserting the batteries into the Remote Commander

Insert the batteries checking the correct polarities.



! Respect your environment! Dispose of used batteries in an evironmental friendly way.

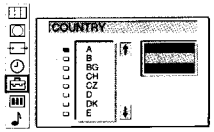
Step 2 Basic Presetting

A Choosing the Menu Language and the Country

Using this function you select the language of the menu screens. Also you select the country in which you will use the TV. In this way the channels of the selected country will automatically get the top positions during automatic presetting.

1 Press the power switch ⏻ I on the TV. If the standby indicator ⏻ H on the TV is lit, press ▢ 6 or a number button 28 on the Remote Commander. Press the MENU button 15 on the Remote Commander. The menu LANGUAGE appears.

2 Push the joystick 17 to blue or green to select the language. Press the joystick 17 to confirm your selection. The menu COUNTRY appears.

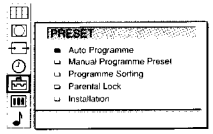


3 Push the joystick 17 to blue or green to select the country in which you wish to operate the TV. Press the joystick 17 to confirm the selection.

4 Press MENU 15 to restore the normal TV picture.

B Presetting Channels Automatically

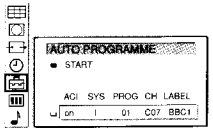
With this function the TV automatically searches and stores up to 100 channels onto programme positions. If you prefer »Manual Presetting of channels« please refer to page 7 in Advanced Operation.



1 Press MENU 15.

2 Push the joystick 17 to blue or green to select the symbol 🧰 on the menu screen, then push to yellow.

3 Push the joystick 17 to blue or green to select »Auto Programme«, then push to yellow. The menu AUTO PROGRAMME appears.



4 a) All items shown on the menu screen are as wanted: Press joystick 17 to select START. Now the automatic channel presetting starts from programme position 1. Channels are automatically stored as follows:
Programme position 1 = BBC1
Programme position 2 = BBC2
Programme position 3 = ITV
Programme position 4 = CH4 or S4C

or

4 b) You wish to change items as shown on the menu screen: Push the joystick 17 to blue or green. Push to yellow repeatedly until the desired item is highlighted.

Joystick

Push the joystick 17 to blue or green to select the following possibilities:

ACI
(Automatic Channel Installation, depending on availability of service in your country)
on: fast channel presetting by special networks using the channel frequency (e.g. F055) TV-system and station label
off: ACI is not active, only ITP (Intelligent Tuner Preset)

SYS (TV Broadcast System)
I for U.K.

PROG (Programme Position)
Presetting automatically starts from position 1.

CH (channel)
C to start presetting with terrestrial channels
S to start presetting with cable channels

Press the joystick 17 as soon as the automatic presetting should start.

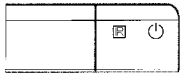
When presetting is finished the normal TV picture appears.

Step 3 TV operation

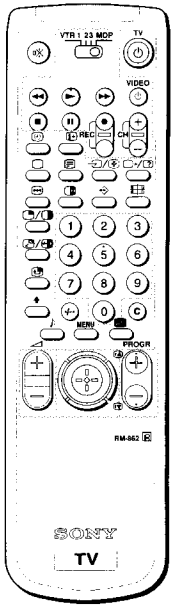
Using Direct Access Buttons

This section explains functions used while watching TV. Most operations are carried out using the Remote Commander (numbers in circles). All basic functions are also available on the TV set itself (letters in boxes).

To	Press
Switch on	• ⏻ I on TV.
Switch off temporarily (Standby mode)	• ⏻ ⑱. TV is now in standby mode and indicator ⏻ H lights up.
Switch on from standby mode	• ▭ ⑥, PROGR +/- ㉕ G or any number button ㉓.
Switch off completely	• ⏻ I on TV. ! To save energy, we recommend to switch off your TV completely when TV is not in use.
Select programmes	• PROGR +/- ㉕ G or number buttons ㉓. For double digit number, press -/- - ⑲, then the two number buttons ㉓. E.g. for 24, press -/- - ⑲, then 2 and 4.
Display a programme table	• The joystick ⑰. Push the joystick ⑰ to blue or green to select a programme, then press the joystick ⑰ to confirm.
Display on screen indications	• ⓘ ③. Press again to make the indications disappear.
Adjust the volume	• ◿ + or - ⑯ F.
Mute the sound	• 🔇 ①. Press again to restore the sound.
Display the time (only available when teletext is broadcast)	• ⏲ ④. Press again to make the display disappear.
Tune in a channel temporarily	• »C« ㉔ once for terrestrial channels, twice for cable channels. The indication »C« or »S« for cable channels appears. Enter the channel number with two digits, e.g. for 4, press 0, then 4.
View the input of a connected device (see also page 18)	• ⇨ ⑳ E repeatedly until the desired input signal appears. Press ▭ ⑥ to restore the normal TV picture.
View teletext (see also page 15)	• ▤ ⑤ to switch on. Input a page number, using the number buttons ㉓ (e.g. for page 125, press 1, 2 and 5). ▭ ⑥ to switch off.
Change the screen mode (see also page 11)	• ▭ ㉒ repeatedly. The mode changes as follows: 4:3 ⟶ 16:9 ⟶ Auto
Freeze the picture	• ⏯ ⑧. Press again to restore the normal TV picture.
Reset picture settings to factory levels	• →•← D.



PROGRAMME TABLE



Advanced Operation

Using the Menu System

Use the following buttons on the Remote Commander to operate the Menu system:

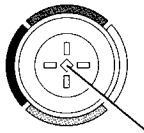
1 Press MENU button ⑮ to switch menu on or off.

MENU

2 Use the joystick ⑰ as follows:

GREEN : scroll up

RED :
decrease/back to last item or to last menu
When menu is not displayed:
Push to red to display the last menu screen



YELLOW :
increase/forward
to next item

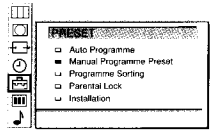
BLUE : scroll down

Joystick: Press at its neutral position to confirm selection or store

Advanced Presetting

Presetting Channels Manually

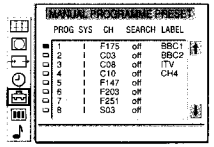
Using this function you can preset channels one by one to different programme positions. It is also convenient to allocate programme numbers to video input sources.



1 Press MENU ⑮.

2 Push joystick ⑰ to blue or green to select the symbol 🧰 on the menu screen. Push to yellow to confirm the selection.

3 Push to blue or green to select »Manual Programme Preset«. Push to yellow to confirm the selection.


MANUAL PROGRAMME PRESET
PROG SYS CH SEARCH LABEL
1 I F175 off BBC1
2 I C03 off BBC2
3 I C08 off ITV
4 I C10 off CH4
5 I F147 off
6 I F209 off
7 I F251 off
8 I S03 off

4 Push to blue or green to select the programme position (PROG) to which you want to preset a channel. Push to yellow to confirm.

5 Push to blue or green to select the TV broadcast system (SYS) (I for Great Britain) or a video input source (EXT). Push to yellow to confirm.

6 Push to blue or green to select »C« (for terrestrial channels), »S« (for cable channels) or »F« (for channel frequency). Push to yellow to confirm.

There are two possibilities to preset channels manually:

a) You know the channel number or channel frequency.
Please use method »Direct input«.

or

b) You don't know the channel number or frequency.
Please use method »Search«.

continued >>>>>>>>>>

7a) Direct Input

For channel numbers you need to input a two digit number, for the frequency a three digit number.

- Push to blue or green to select the first digit of the channel number or frequency. Push to yellow to confirm.
- Push to blue or green to select the second digit of the number or frequency. Push to yellow to confirm. In case of the channel number the search starts.
- Push to blue or green to select the third digit of the frequency number. Push to yellow to start the search of the frequency.
- To continue search for another channel: Push to blue or green.
- To store the selected channel: Press the joystick ⓱.
- Repeat steps 4 to 7a) to preset other channels.

Joystick

7b) Search

- Push repeatedly to yellow until a blue and a green arrow appear in the section SEARCH.
- Push to blue or green to search for the next available channel.
- To continue search for another channel: Push to blue or green.
- To store the selected channel: Press the joystick ⓱.
- Repeat steps 4 to 7b) to preset other channels.

Captioning a Station Name

Channels are usually automatically labelled during presetting. You can, however, individually name a channel or a video source using up to five characters.

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Manual Programme Preset«. Push to yellow to confirm.

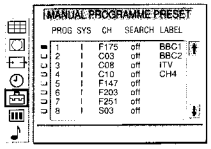
4 Push to blue or green to select the programme position with the channel you want to label. Push to yellow repeatedly until the first element of the position LABEL is highlighted.

5 Push to blue or green to select a letter or a number (select »-« for a blank). Push to yellow to confirm. Select the other four characters in the same way.

6 After selecting all characters, press the joystick ⓱.

7 Repeat steps 4 to 6 to label other channels or video sources.

8 Press MENU ⓯ to restore the normal TV picture.


MANUAL PROGRAMME PRESET
PROG SYS CH SEARCH LABEL
1 I F175 off BBC1
2 I C03 off BBC2
3 I C08 off ITV
4 I C10 off CH4
5 I F147 off
6 I F203 off
7 I F251 off
8 I S03 off

Adjusting the Picture Rotation

If, due to the earth magnetism, the picture slants, you can use this function to readjust the picture.

1 Press MENU ⓯.

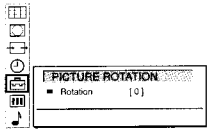
2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Installation«. Push to yellow to confirm.

4 Push to blue or green to select »Picture Rotation«. Push to yellow to confirm.

5 Push to yellow. Push to blue or green to adjust the picture rotation. The adjusting range is - 4 to + 4. Press the joystick ⓱ to confirm.

6 Press MENU ⓯ to restore the normal TV picture.



Skipping Programme Positions

Joystick

This function enables you to skip unused programme positions when selecting them with the PROGR +/- buttons. However, by using the number buttons you can still select the skipped programme position.

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen. Push to yellow to confirm.

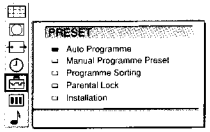
3 Push to blue or green to select »Manual Programme Preset«. Push to yellow to confirm.

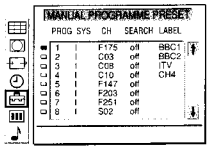
4 Push to blue or green to select the programme position you want to skip. Push to yellow to confirm.

5 Push to blue or green to select »----« in the position SYS (system). Press the joystick ⓱ to confirm.

6 Repeat steps 4 and 5 to skip other programme positions.

7 Press MENU ⓯ to restore the normal TV picture.




MANUAL PROGRAMME PRESET
PROG SYS CH SEARCH LABEL
1 I F175 off BBC1
2 I C03 off BBC2
3 I C08 off ITV
4 I C10 off CH4
5 I F147 off
6 I F203 off
7 I F251 off
8 I S02 off

Sorting Programme Positions

This function enables you to sort the programme positions to a preferable order.

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen. Push to yellow to confirm.

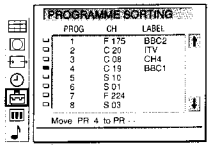
3 Push to blue or green to select »Programme Sorting«. Push to yellow to confirm.

4 Push to blue or green to select the programme position of the channel you want to exchange. Press joystick ⓱ to confirm.

5 Push to blue or green to select the programme position of the second channel. Press joystick ⓱ to confirm. Now the two programme positions are swapped and sorted.

6 Repeat steps 4 and 5 to sort other programme positions.

7 Press MENU ⓯ to restore the normal TV picture.



Using Parental Lock

This function enables you to prevent children watching undesirable broadcasts.

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol 🧰 on the menu screen. Push to yellow to confirm.

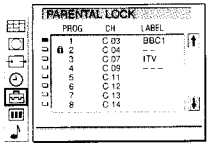
3 Push to green or blue to select »Parental Lock«. Push to yellow to confirm.

4 Push to green or blue to select the channel you want to block. Press the joystick ⓱ to confirm. The symbol 🔒 appears before the programme position to indicate that this channel is now blocked.

5 Repeat step 4 to block other channels.

6 Press MENU ⓯ to restore the normal TV picture.

! To unblock: Select the channel to unblock in the menu »Parental Lock«. Press the joystick ⓱. The symbol 🔓 disappears.



Using »Further Programme Preset«

Using the menu »Further Programme Preset« you can

a) in case of a strong local aerial signal (striped picture) attenuate the signal individually for each programme position (RF attenuator).

b) individually adjust and store the volume level of each channel (Volume offset).

c) in case of picture or sound distortions use manual fine tuning to obtain a better picture quality. The factory setting is »on« for AFT (Automatic Fine Tuning).

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Installation«. Push to yellow to confirm.

4 Push to blue or green to select »Further Programme Preset«. Push to yellow to confirm.

5 Push to blue or green to select the programme position you want. Push to yellow repeatedly to select:
a) ATT (RF attenuator), b) VOL (Volume Offset) or c) AFT (Automatic Fine Tuning).
The selected item changes colour.

6a) **ATT**
Push to blue or green to select »ON« for the programme position and press the joystick ⓱ to confirm. Repeat step 6 to attenuate other programme positions.

b) **VOL**
Push to blue or green to adjust the volume for the selected programme position within a range of -7 to +7. Press the joystick ⓱ to confirm. Repeat step 6 to set the volume level for other programme positions.

c) **AFT**
Push to blue or green to fine-tune the channel within a range of -15 to +15. Press the joystick ⓱ to confirm. Repeat step 6 to fine-tune other channels.

7 Press MENU ⓯ to restore the normal TV picture.

Using »AV Preset«

Using this function you can preset the desired input source (e.g. 1, RGB signal) to the respective AV input (AV1). In this way a connected VCR switches automatically to the RGB signal. Also you can label the input sources.

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol on the menu screen. Push to yellow to confirm.

3 Push to blue or green to select »Installation«. Push to yellow. Push to blue or green to select »AV Preset«. Push to yellow to confirm.

4 Push to blue or green to select the desired AV input. Push to yellow to confirm.

5 Push to blue or green to select the desired source. Push to yellow to confirm. For the respective AV inputs you have the following choice:
AV1: RGB or AV
AV2: YC2 or AV
AV3: YC3 or AV

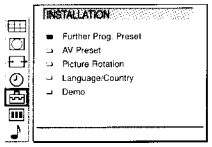
6 To label a source: Push to blue or green to select the first character (letter or number, »-« for a blank). Push to yellow to confirm. Select the other four characters in the same way.

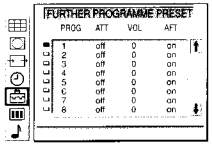
7 Repeat steps 4 to 6 for the other AV inputs.

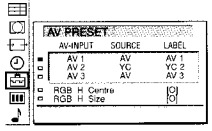
8 For RGB input source only: Push to blue or green to select RGB H Centre.
- Push to yellow to confirm.
- Push to blue or green to adjust the centre of the picture in a range of –5 to +5. Press the joystick ⓱ to store.
- Repeat step 8 to adjust RGB H Size.

9 Press MENU ⓯ to restore the normal TV picture.

Joystick







Advanced TV operation

Adjusting the Picture and Sound

Joystick

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

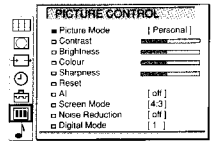
1 Press ⓭ (for Picture) or ♪ ⓮ (for Sound)
or
Press MENU ⓯.
Push joystick ⓱ to blue or green to select for Picture Control or ♪ for Sound Control. Push to yellow to confirm. The menu PICTURE CONTROL or SOUND CONTROL appears.

2 Push to blue or green to select the desired item. Push to yellow to confirm.

3 Push to red or yellow to adjust the selected item. Press the joystick ⓱ to confirm. For the effect of each control, see the following tables.

4 Repeat steps 2 and 3 to adjust other items.

5 Press MENU ⓯ to restore the normal TV picture.



Picture Control

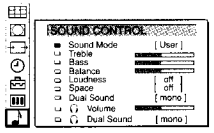
Item	Effect
Picture Mode	• Personal ⟶ Economy (energy saving setting) ⟶ Live ⟶ Sports ⟶ Movie ⟶ Game
Contrast	• Less ——|—— More
Brightness*	• Darker ——|—— Brighter
Colour*	• Less ——|—— More
Hue**	• Greenish ——|—— Reddish
Sharpness*	• Softer ——|—— Sharper
Reset	• Resets picture to the factory preset levels
AI	• Off: Normal On: Automatic optimization of contrast level according to TV signal
Screen Mode	• Auto (automatic format selection) ⟶ 16:9 ⟶ 4:3
Noise Reduction	• Off: Normal On: Reduction of picture noise in case of weak signals
Digital Mode	• 1: Normal 2: LFR (Line Flicker Reduction) off

* Only if »Personal« or »Economy« is selected in »Picture Mode«.
** Available for NTSC colour system only.

Sound Control

Item	Effect
Sound Mode	• Choice between different sound effects User → Pop → Jazz → Rock
Treble*	• Less ——|—— More
Bass*	• Less ——|—— More
Balance	• More left ——|—— More right
Loudness*	• Off: normal On: for music broadcasts
Space	• Off: normal On: special acoustic effect
Dual Sound	• A: channel 1 or B: channel 2 Stereo → Mono
Headphones	
∩ Volume	• Less ——|—— More
∩ Dual Sound	• A: channel 1 or B: channel 2 → PAP (if PAP is switched on, you can select the PAP sound for the headphones) → Stereo → Mono

* Only if »User« is selected in »Sound Mode«



Selecting Nicam Broadcasts*

This Sony TV has been designed to select Nicam broadcasts when available. Whenever a Nicam broadcast is received, »NICAM« appears briefly on the screen. Nicam programmes can be broadcast in two ways. You may select the sound you want to hear in either of these by first following the instructions explained on top of this page.

Service Being Broadcast	Action	Effect
Stereo	push Joystick ⓱ to blue or green	Stereo Nicam (Mono 2-Channel) mono
Push to blue or green again to return to stereo Nicam (mono 2-channel)		
Bilingual	push Joystick ⓱ to blue or green	Channel A Nicam Channel B Nicam mono
Push to blue or green again to return to channel A Nicam		

*Depending on availability of service.

Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

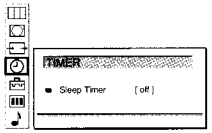
1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ◷ on the menu screen. Push to yellow to confirm.

3 Push to yellow. Push to blue or green to select the time.
OFF → 10 min → 20 min .....80 min → 90 min.
Press the joystick ⓱ to confirm.

4 Press MENU ⓯ to restore the normal TV picture.

! One minute before the TV switches into standby mode, a message is displayed on the screen.



Using »Multi PIP«

Using »Multi PIP« you can scan 9 successive TV channels on the screen (Programme Catching) or display 8 successive freeze pictures on the screen (Photo Mode).

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select the symbol ▦ on the menu screen. Push to yellow to confirm.

a) Programme Catching

Push to blue or green to select »Programme Catching«. Press the joystick ⓱. Now a scan of 9 successive programmes (8 still pictures, 1 live picture where the cursor is positioned) is displayed on the screen starting from the programme tuned in. Pushing the joystick to blue, green, red or yellow you can move the cursor in all directions and update the still pictures. When selecting a programme position lower or higher than the 9 displayed ones the programme scanning starts again. Press MENU ⓯ to restore the normal TV picture.

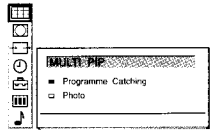
Selecting a programme using Programme Catching:

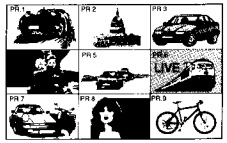
Push the joystick ⓱ to blue, green, red or yellow to select the programme position you want, then press the joystick ⓱. Now the selected programme appears and you are back in the normal TV mode.

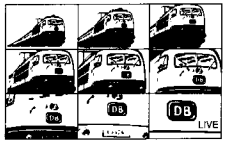
b) Photo mode

Push to blue or green to select »Photo mode«. Press the joystick ⓱. Now the main picture is displayed as a succession of 8 still pictures and a 9th picture, which is live. Push to blue or green to start the photo mode again. Press the joystick ⓱ to restore the normal TV picture.

Joystick







Operating Screen Mode

Using Screen Mode you can operate PAP (picture and picture) or reproduce the main picture image by image (Strobe function).

1 Press MENU ⓯.

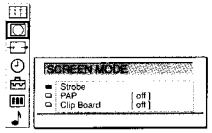
2 Push joystick ⓱ to blue or green to select the symbol ▢ on the menu screen. Push to yellow to confirm.

3 Strobe Mode
Push to blue or green to select »Strobe«. Press joystick ⓱ to confirm. The TV picture is now displayed image by image, creating a slow motion effect. Push to blue or green to select the speed of the motion. Press the joystick ⓱ to restore the normal TV picture.

4 PAP (picture and picture)
Push to blue or green to select »PAP«. Push to yellow to confirm. Push to blue or green to select:
1 – PAP screen with 66 % expanded screen size, 2 – PAP screen with 50 % normal screen size, Off – PAP switched off
Press joystick ⓱ to confirm.

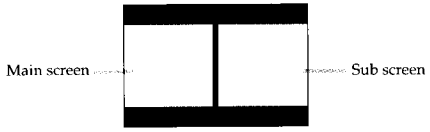
5 Clipboard
Push to blue or green to select »Clipboard«. Push to yellow to confirm. Push to blue or green to select »On« to freeze the PAP screen or »Off« for normal picture.
Press joystick ⓱ to confirm.

6 Press MENU ⓯ to restore the normal TV picture.



PAP (Picture and Picture)

With PAP you can view two programmes simultaneously (e.g. two TV channels or a video source and a TV channel). The left screen is the main screen with the sound from the speakers, the right screen is the sub screen with the sound selectable via headphones.



Switching PAP on and off

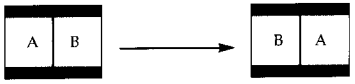
Press ⧉/⧉ ❾ once to display the screens with 66 % size (expanded view), twice to display the screens with 50 % size (normal screen dimension) and three times to switch PAP off.

Selecting a PAP source

Press ⬆ ⓬.
The symbol ⬆ appears in the sub screen. Select the PAP source using PROGR +/– ㉘, the number buttons ㉘ or ⇥ ⓴ (for a video source).

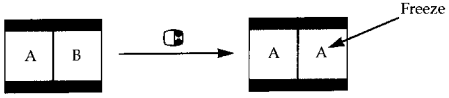
Swapping screens

Press ⧉/⧉ ❿ once to swap the programmes of the main and sub screens.



Freezing the picture of the main screen

Press ⧉ ❼ once to freeze the main screen, twice to return to the normal live picture.



In the PAP mode, if the picture from the video source input is poor, we recommend you select the left hand side picture for your AV input.

Teletext

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) informs you about how to use the service. Make sure to use a TV channel with a strong signal, otherwise Teletext errors may occur.

Direct Access Function

Switching Teletext on and off

1 Select the TV channel which carries the teletext service you want to view.

2 Press ☰ ❺ once to get Teletext only.
Press ☰ ❺ twice for Mix mode. The normal TV screen and the Teletext screen are overlapped.

3 Press ▢ ❻ to switch Teletext off.

Selecting a Teletext page

Direct Page Selection

Use the number buttons ㉘ to input three digits of the page number.
If you have made a mistake: Type in any three digits, then reenter the correct page number.

Page Catching

1 Select a teletext page with page numbers (e.g. index page).

2 Press the joystick ⓱. »Page Catching« is displayed at the top of the page.
Push joystick ⓱ to blue or green to select the page you want. Press the joystick ⓱.
The requested page is displayed after some seconds.

Joystick

Accessing the next or preceding page

Press ▲ ㉖ (Page +) or ▼ (Page -).

Freezing a teletext subpage

Press ⊜ ⓴. The symbol ⊜ is displayed.
Press ☰ ❺ to resume normal teletext reception.

Revealing hidden information (e.g. for a quiz)

Press ? ⓳. Press again to cancel.

Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke. When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue marks on the Remote Commander. Push the joystick ⓱ to the colour mark which corresponds to the colour-coded menu. The page is displayed after some seconds.

continued >>>>>>>>>

Using the Teletext Menu

Your TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the buttons for menu operation to operate the teletext menu.
Select the teletext menu functions as follows:

1 Press MENU ⓯. The menu is superimposed on the teletext display.

2 Push the joystick ⓱ to blue or green to select the teletext function you want.
Push to yellow to confirm the selection.

USER PAGES/PRESET USER PAGES
See page 17 for information about presetting and operating the user pages.

INDEX
The index gives you an overview of the contents of the teletext you are using.

TOP/BOTTOM/FULL
For convenient reading of a teletext page you can enlarge the teletext page. After selecting the function, an information line »↑ Top ↓ Bottom OK Full« is displayed. Push joystick ⓱ to green to enlarge the upper half, push to blue to enlarge the lower half. Press the joystick ⓱ to resume the normal display. Press ☰ ❺ to resume normal teletext reception.

TEXT CLEAR
After selecting the function, you can watch a TV programme while waiting for a requested teletext page to be captured. When the page is available, the symbol ☰ changes colour. Press ☰ ❺ to view the requested page.

SUBTITLES
Check with your teletext service for information about subtitled TV programmes.
After selecting the function the subtitles are displayed.

TIME PAGE
Check with your teletext service about the availability of time coded pages.
If available, you can call up a page (e.g. an alarm page) at a certain time.

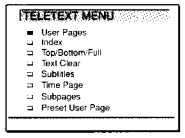
1 Select TIME PAGE in the teletext menu.
Push joystick ⓱ to yellow. An information window is displayed. Push to blue or green to select »On«. Push to yellow.

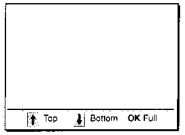
2 Use the number buttons ㉓ to enter the three digits of the page you want (e.g. 301).
Push to yellow after each digit.

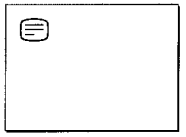
3 Use the number buttons ㉓ to enter the four digits of the desired time (e.g 18-54).
Push to yellow after each digit. Press joystick ⓱ to confirm. Press MENU ⓯. The time is displayed in the top left-hand corner of the screen.
At the requested time the page is displayed.

SUBPAGE
Using this function you can select a particular teletext page from several subpages (e.g. page 2 of 6 pages in total). After selecting the function an information line is displayed. Use the number buttons ㉓ to enter the four digits (e.g. enter 0002 for the second page of a sequence).
To cancel the request: Press the number button »0« ㉓ four times.

Joystick







User Page Bank System

You can store up to 6 of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

Storing pages

1 Press ☰ ❺ to switch Teletext on. Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select »Preset User Pages«.
Push to yellow to confirm.

3 Push to blue or green to select the bank (from A to E) you want.
Push to yellow to confirm.

4 Push to blue or green to select the three digits of your first favourite page.
Push to yellow after each digit. Push to yellow to confirm.

5 Repeat step 4 for the other 5 favourite pages. If you do not want to preset all 6 page numbers push to yellow without inserting any number. After finishing the presetting, press the joystick ⓱.

6 Push to blue or green to select »Allocate Bank«. Push to yellow to confirm.

7 Push to blue or green to select the programme position of the channel which carries the teletext service for which you have selected your favourite pages.
Push to yellow to confirm.

8 Push to blue or green to select the bank from step 3. Press the joystick ⓱ to confirm.
Push to red.

9 Repeat steps 3 to 8 for the other 4 banks available.

Displaying User Pages

1 Press MENU ⓯.

2 Push joystick ⓱ to blue or green to select »User Pages«. Push to yellow to confirm.

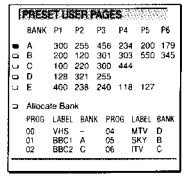
3 Push to blue or green to select the page you want. Press the joystick ⓱.
The page is displayed after some seconds.

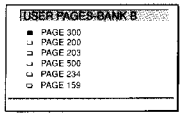
or

1 Press ⌖ ㉑.

2 Push joystick ⓱ to blue or green to select the page you want. Press the joystick ⓱.
The page is displayed after some seconds.

Joystick





Optional Equipment

Connecting Optional Equipment

You can connect a wide range of optional equipment to your TV. Refer to the illustrations on the back lap page of this Instruction Manual.

Symbol	Acceptable input signals	Available output signals
1	Normal audio/video and RGB	Audio/video from TV tuner
2/2	Normal audio/video and S video	Audio/video from selected source
3, 3	Normal audio/video and S video	No output
	No inputs	Audio from selected source

About S video input
Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

Tips:
- If the picture or sound is distorted, move the VCR away from the TV.
- When connecting a monaural VCR, connect only the white jack to both the TV and VCR.

Selecting Input and Output Signals

a) Direct Access Buttons

Selecting the Input
Press 20 E repeatedly to select one of the following input modes:

Symbol on the screen	Input signals	
1	Audio/video through Euro AV connector	J
	RGB through Euro AV connector	J
2	Audio/video through Euro AV connector	L
2	S video through Euro AV connector	L
3	Audio/video through the phono jacks	C
3	S video through the 4 pin DIN	B

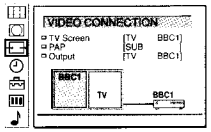
Press 6 to restore the normal TV picture.

Selecting the Output from Euro AV connector 2/2 L
Press 19 repeatedly to select one of the following output sources for the connector 2/2 L:

Symbol on the screen	2/2 L connector output signal	
1	Audio/video from Euro AV connector	J
2	Audio/video from Euro AV connector	L
2	Audio/video from Euro AV connector	L
3	Audio/video from the phono jacks	C
3	Audio/video from the 4 pin DIN	B
TV	Audio/video from the aerial terminal	K

b) Using the Menu »Video Connection«

1 Press MENU 15.
2 Push joystick 17 to blue or green to select the symbol on the menu screen. Push to yellow to confirm.
3 Push to blue or green to select »TV screen« (input source for TV-screen), PAP (source for PAP sub screen), or »Output« (output source for 2/2 L). Push to yellow to confirm.
You can select between the following sources:
• TV: TV-tuner • YC: S video signal • AV: Audio/Video • Sub: 2nd TV-tuner
TV screen: TV, AV1, RGB, AV2, YC2, AV3, YC3
PAP: Sub, AV1, AV2, YC2, AV3, YC3
Output: TV, AV1, AV2, YC2, AV3, YC3
4 Push to blue or green to select the desired source. Press joystick 17 to store.
5 Press MENU 15 to restore the normal TV picture.



Joystick

Remote Control of other Sony Equipment

Using the buttons 2 on the Remote Commander you can control other Sony equipment.

1 Set the selector VTR 1 2 3 MDP according to the equipment you want to control.
VTR 1: Beta VCR
VTR 2: 8mm VCR
VTR3: VHS VCR
MDP: Video Disk Player
2 Use the buttons 2 on the Remote Commander to operate the equipment.

Tips
- If your video equipment has a COMMAND MODE selector, set this selector to the same position as the VTR 1 2 3 MDP selector on the TV Remote Commander.
- If the equipment does not have a certain function, the corresponding button on the Remote Commander does not work.

Additional Information

Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.

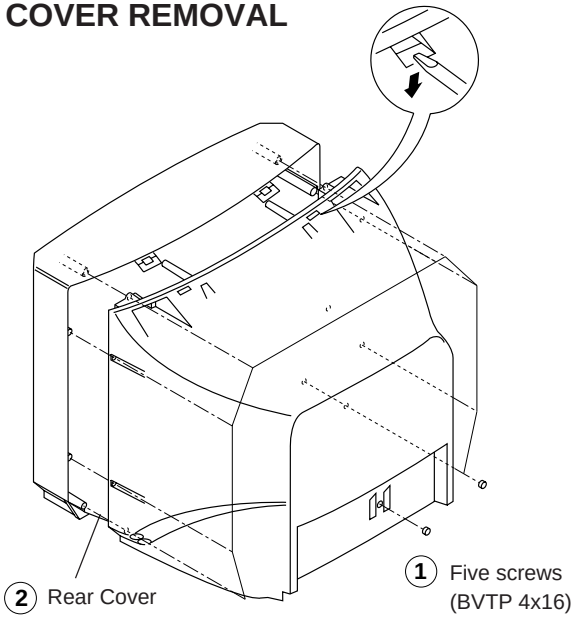
Problem	Solution
No picture (screen is dark), no sound	• Plug the TV in. • Press ⏻ I on the TV. (If ⏻ indicator H is on, press ▢ 6 or a programme number 23 on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds and then turn it on again using ⏻ I.
Poor or no picture (screen is dark), but good sound	• Press ● 25 to enter the PICTURE CONTROL menu and adjust »Brightness«, »Contrast« and »Colour«.
Poor picture quality when watching an RGB video source	• Press ⇥ 20 repeatedly to select .
Good picture but poor or no sound	• Press + 15. • If 🔇 is displayed on the screen, press 🔇 1.
No colour for colour programmes	• Press ● 25 to enter the PICTURE CONTROL menu, select RESET, then press joystick 17.
Remote Commander does not function.	• Replace batteries.

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

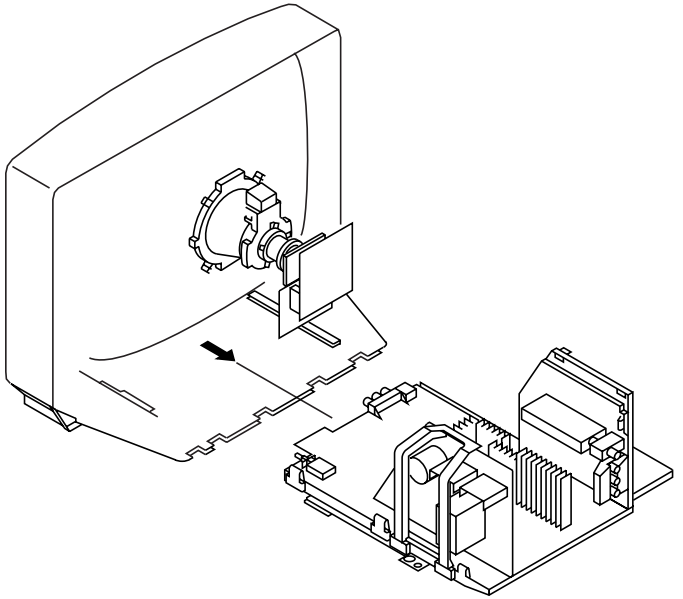
Design and specifications are subject to change without notice.

SECTION 2
DISASSEMBLY

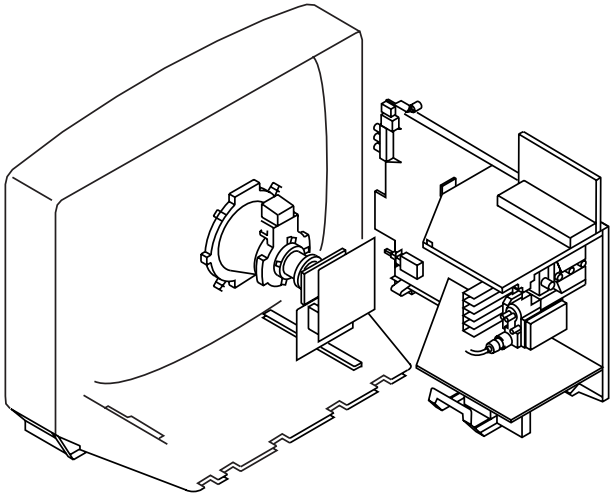
2-1. REAR COVER REMOVAL



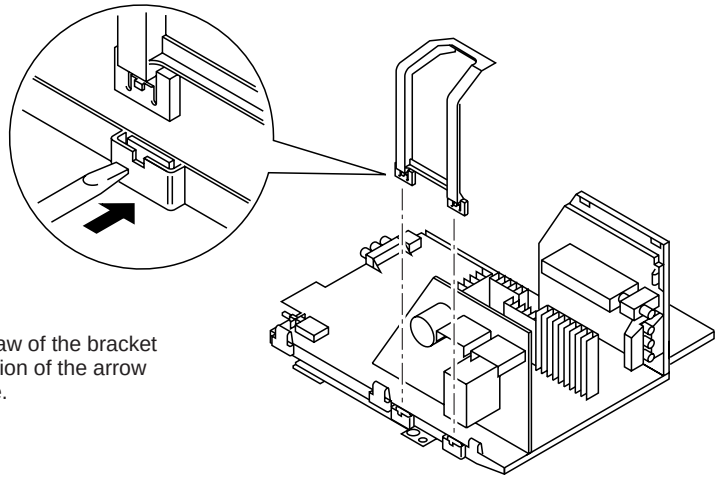
2-2. CHASSIS ASSY REMOVAL



2-3. SERVICE POSITION

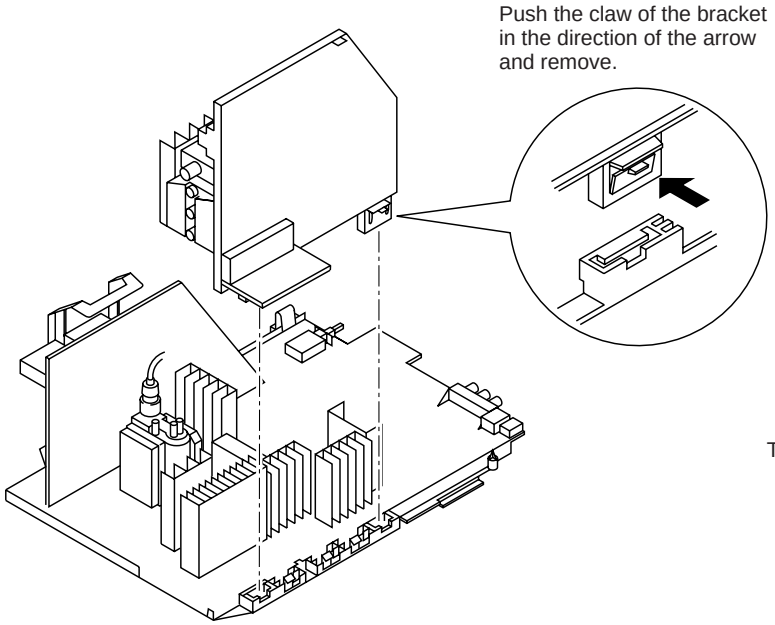


2-4. G BOARD REMOVAL

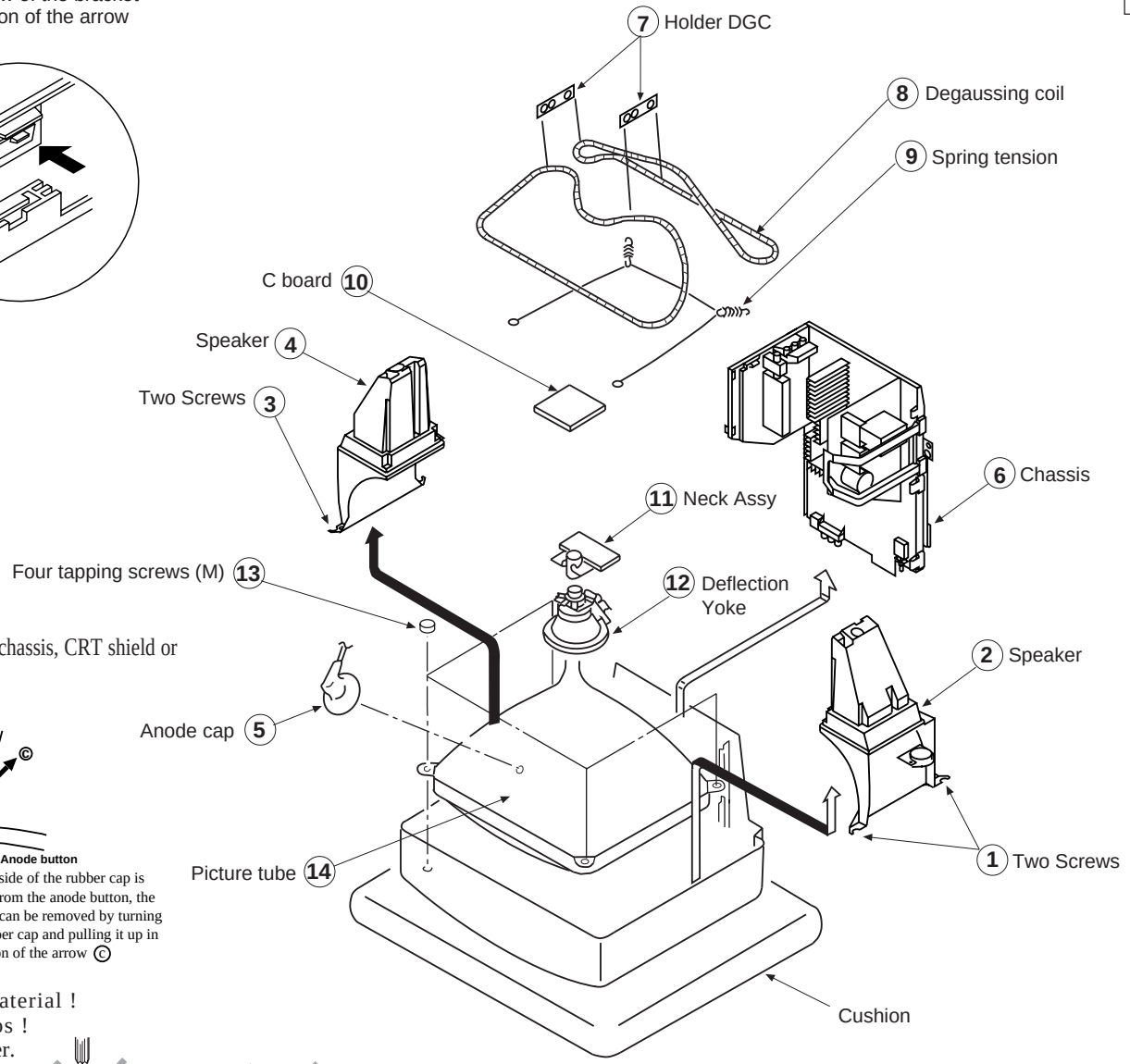


Push the claw of the bracket in the direction of the arrow and remove.

2-5. A BOARD REMOVAL



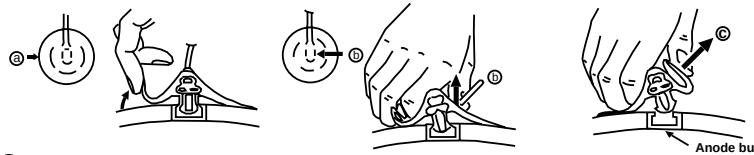
2-6. PICTURE TUBE REMOVAL



- **REMOVAL OF ANODE-CAP**

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

*** REMOVING PROCEDURES.**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ

② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ

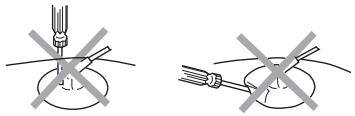
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

- **HOW TO HANDLE AN ANODE-CAP**

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don't turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.



REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

For safety reasons, on no account should the plates be removed and not refitted after servicing.

(1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

Note : There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

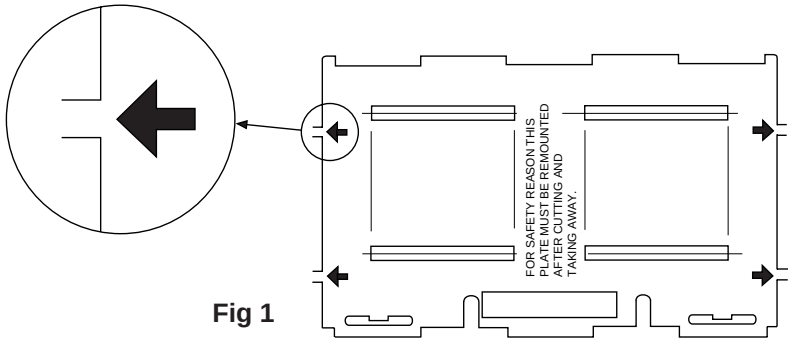


Fig 1

(2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.
The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

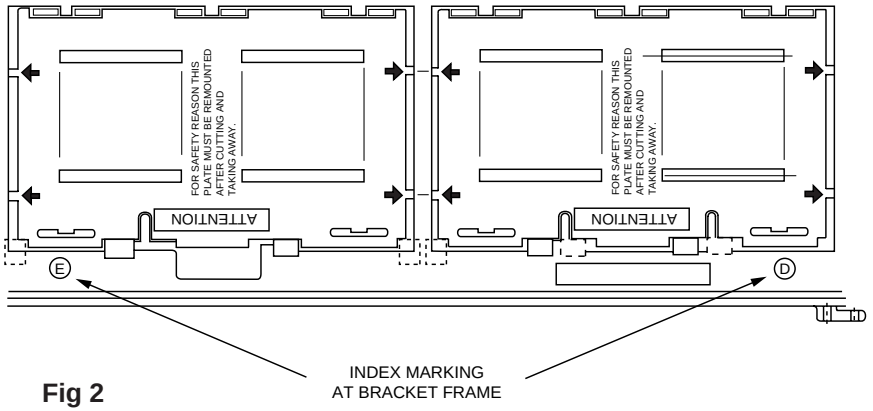

FOR SAFETY REASON THIS PLATE MUST BE REMOUNTED AFTER CUTTING AND TAKING AWAY.
ATTENTION
E
D
INDEX MARKING AT BRACKET FRAME

Fig 2

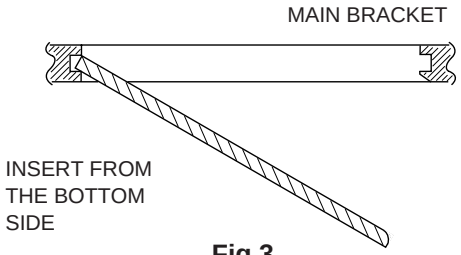


Fig 3

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

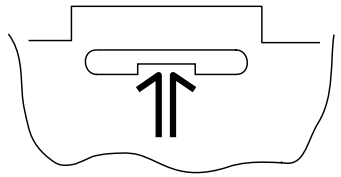


Fig 4

SECTION 3
SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustment with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches as follows.

Contrast ..... normal
Brightness ..... normal

- Carry out the following adjustments in this order:

3-1. Beam landing
3-2. Convergence
3-3. Focus
3-4. White balance

Note: Testing equipment required.
1. Color bar/pattern generator
2. Degausser
3. Vector scope

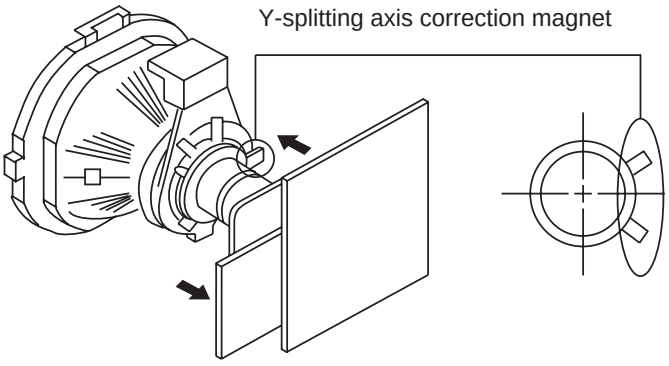
3-1. BEAM LANDING

Preparation:

1. In order to reduce the influence of geomagnetism on the set's picture tube face it in an easterly or westerly direction.
2. Switch on the set's power and degauss with the degausser.

(1) Adjustment of Correction Magnet for Y-Splitting Axis

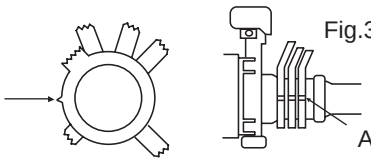
1. Input a crosshatch signal from the pattern generator.
2. Picture control is minimum and brightness control is still normal.
3. Position the neck assy as shown in Fig. 3-2.
4. Move the deflection yoke forward to touch the CRT and it stands up rightly.
5. Adjust the upper pin and the lower pin symmetrically by opening or closing the Y-splitting axis correction magnets on the neck assy.
6. Return the deflection yoke to its original position.

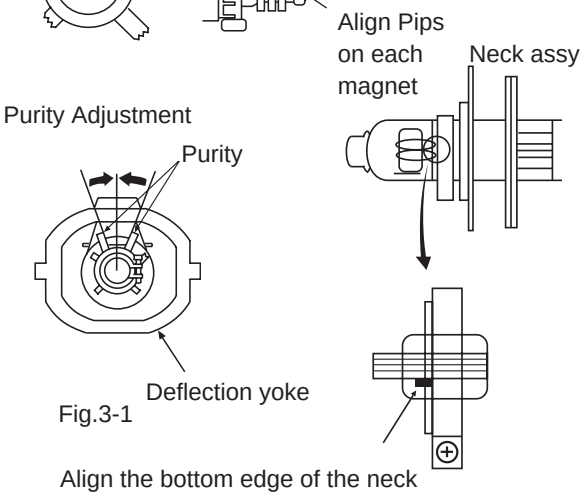


(2) Landing

Note: Before carrying out the following adjustments adjust the magnets as indicated below (See Fig.3-3).

1. Input an all-white signal from the pattern generator. Maximize the picture setting and adjust the brightness setting.
2. Rough-adjust the focus and horizontal convergence.
3. Loosen the deflection yoke screws, align the purity adjustment knob to the central position. (See Fig. 3-1)
4. Switch from the all-white pattern to an all-green pattern.
5. Move the deflection yoke backwards and adjust with the purity magnet so that the green is at the center and it aligns symmetrically. (See Fig. 3-4)
6. Move the deflection yoke forward and adjust so that entire screen becomes green.
7. Switch the raster signal to red, then to blue and verify the landing condition.
8. When the position of the deflection yoke has been determined, fasten the deflection yoke with the screw.
9. If the beam does not land correctly in all the corners, use magnets to correct it. (See Fig. 3-5)





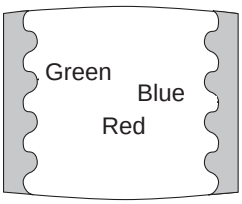


Fig.3-4

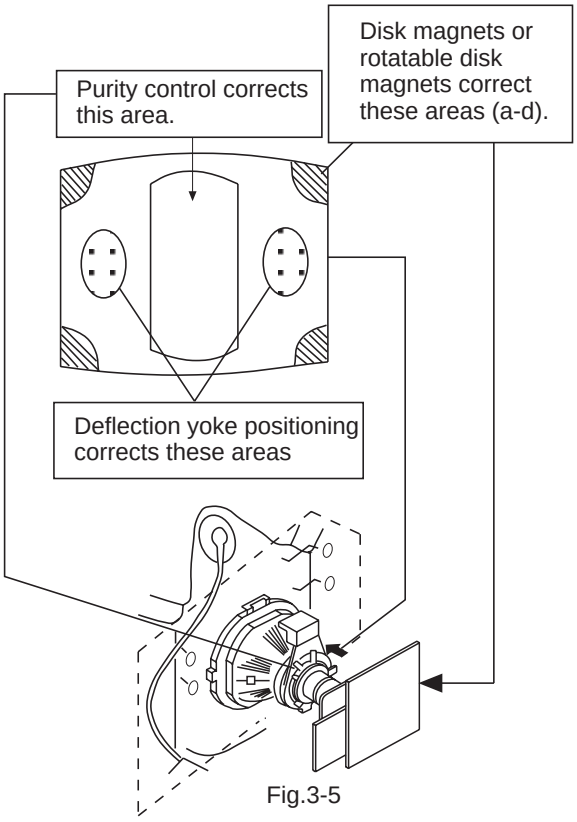
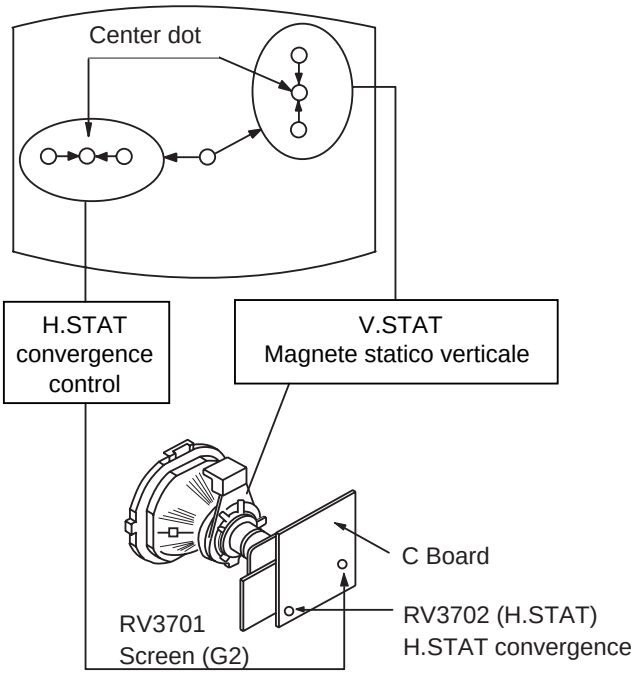

Disk magnets or rotatable disk magnets correct these areas (a-d).
Purity control corrects this area.
Deflection yoke positioning corrects these areas

Fig.3-5

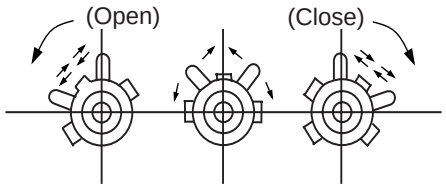
3-2. CONVERGENCE

(1) Screen center convergence (Static convergence)

1. Input a dot signal from the pattern generator. Normalize the picture setting.
2. (Moving horizontally), adjust the H.STAT control so that the horizontal red, green and blue dots coincide at the center of screen.
3. (Moving vertically), adjust the V.STAT magnet so that the vertical red, green and blue points coincide at the center of screen.

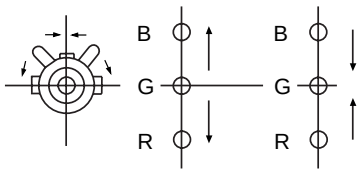


- If the horizontal dots are unable to coincide with the variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking. (Adjust the convergence by tilting the V.STAT convergence or by opening or closing the V.STAT convergence.)

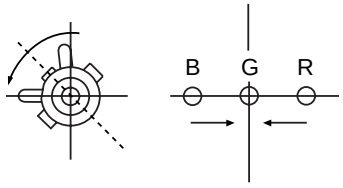


4. Movement of the red, green and blue dots by tilting the V.STAT magnet and by opening or closing the V.STAT magnet.

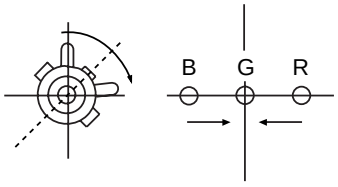
① By opening or closing the V.STAT magnet, the red, green and blue points move as shown below



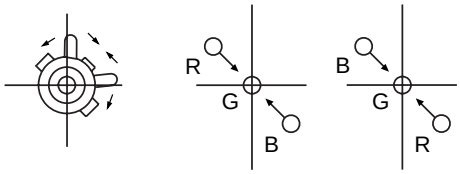
②By rotating the V. STAT magnet counterclockwise, the red, green and blue dots move as shown below.



③By rotating the V.STAT magnet clockwise, the red, green and blue dots move as shown below.



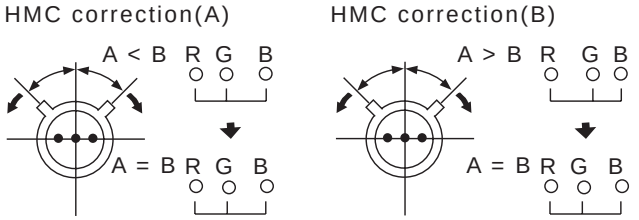
④By opening or closing the V.STAT magnet, the red, green and blue dots move as shown below.



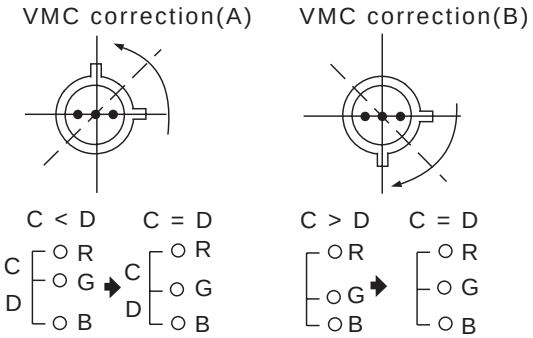
- If the blue dot does not coincide with the red and green points, correct the points by using the BMC (Hexapole) magnet.

⑤Correction for HMC (horizontal mis-convergence) and VMC (vertical mis-convergence) by using the BMC (Hexapole) magnet.

①HMC correction by BMC (Hexapole) magnet and movement of the electronic beam.



②VMC correction by BMC (Hexapole) magnet and movement of the electronic beam.



Layout of each control

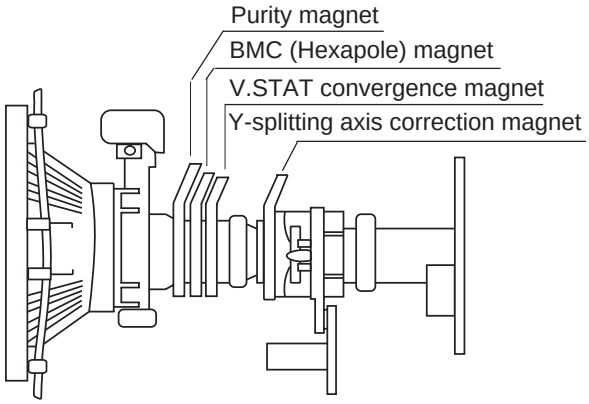
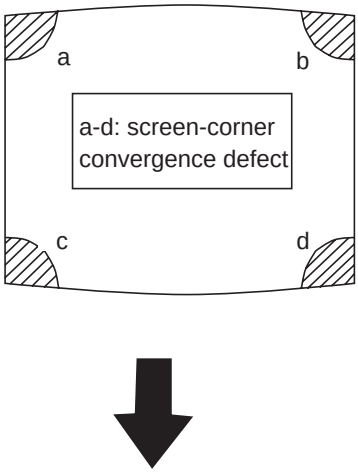
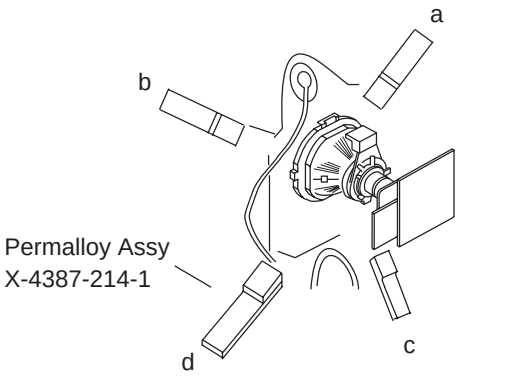


Fig.3-5

2. If you are unable to adjust the corner convergence properly, correct them with the use of permalloys.

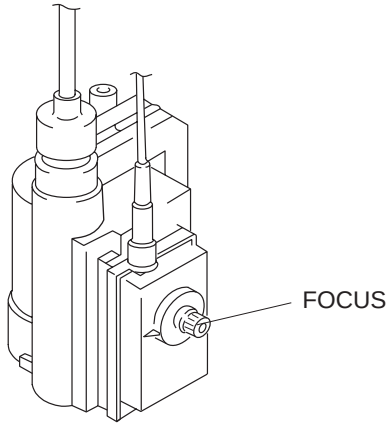




Convergence adjustment with permalloy

3-3. Focus

1. Receive a television broadcast signal.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer for the best focus at the center of the screen.
   Bring only the center area of the screen into focus, the magenta-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



3-4. Screen (G2), White balance (Adjustment in the service mode with remote commander)

G2 adjustment (RV3701)

1. Input a dot signal from the pattern generator.
2. Set the Picture, Brightness and Colour to minimum.
3. Apply 170V DC from an external power supply to the R, G and B cathodes of the CRT.
4. While watching the picture, adjust the G2 control RV3701 [SCREEN] on the C board to the point just before the return lines disappear.

White balance adjustment

1. Receive an all-white signal.
2. Enter into the Service Mode by pressing ' TEST ', ' TEST ' and ' MENU' on the Service Commander.
3. Select ' VIDEO PROC. ' from the on screen menu display and press OK .
4. The ' VIDEO PROC TDA4780' menu will appear on the screen.

Video Proc. TDA4780

Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON=3LEV OFF=2LEV	OFF
14	DELAY	OFF

5. Set picture to MAX.
6. Set the ' R GAIN ' to 25.
7. Adjust the ' G GAIN ' and ' B GAIN ' so that the white balance becomes optimum.
8. Press the OK button to write the data for each item.
9. Set picture to MIN.
10. Set the ' R LVL REF ' to 31.
11. Adjust ' G LVL REF ', and ' B LVL REF ' with the left and right buttons so that the white balance becomes optimum.
12. Press the OK button to write the data for each item.

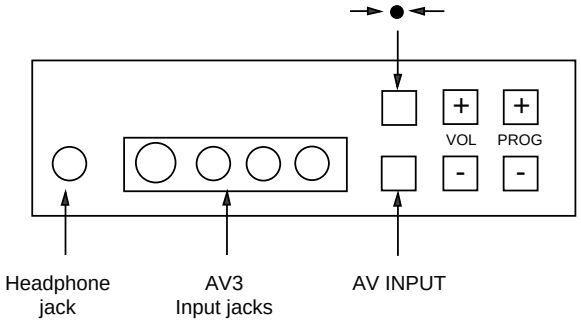
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander, RM-862.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing the PROG + (plus) and PROG - (minus) buttons on the front panel.



2. "TT" will appear on the upper right corner of the screen.
3. Press " MENU " on the commander to get the service menu on screen.

DEVICES	
Init TV	
Pip, Lumisponder & Autoside	
Sub Adjust	
Video Proc	TDA4780
Col Dec Main	TDA9144
Deflect. Cont	SDA9361
Col Dec Sub	TDA9143
Feature Box	S87C654
AI	TDA9170
DA	SDA9280
Single PIP	SDA9288
Sound	
Line23 det	

4. Push the joystick up (green) or down (blue) on the remote commander to select the adjustment item.
5. Press the center button to proceed to the next menu.
6. If the adjustment item is 'Video Proc.', push the down button to move to 'Video Proc.'.
7. The Menu as indicated in Fig 4-3 will appear on the screen.

8. Move the joystick up or down to move to the adjustment item and press the center (OK) button.
9. Change the data in order to comply with each standard.

Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON=3LEV OFF=2LEV	OFF
14	DELAY	OFF
15	DATA BUFF	OFF
16	NTSC MATRIX	OFF
17	HDTV	OFF
18	FSBL	OFF
19	AUTO CUT OFF	ON
20	FSW 2 DIS	OFF
21	FSW 2	OFF
22	FSW 1 DIS	OFF
23	FSW 1	OFF
24	ADAPT BLACK	ON
25	Y HIGH 1V	OFF
26	MOD2	OFF
27	BLUE STRETCH	*
28	VM OUT	OFF
29	PEAK DRV ABS	ON
30	TIME CNST PEAK LIMIT	OFF

Fig. 4-3 * Switch OFF for White balance Adj and Switch ON for Shipping Condition

SDA9361 (DEFLECT. CONT.)

Item No	Adjustment item	Data Amount
1	V Size	Adj
2	V Centrre	Adj
3	V Linearity	Adj
4	S Correction	Adj
5	H Size	Adj
6	Pin Amp	Adj
7	Up Corner Correction	Adj
8	Low Corner Correction	Adj
9	V Bow	Adj
10	Pin Phase	Adj
11	V Angle	Adj
12	HDE	ON
13	VR	0
14	RABL	ON
15	Blk Dis	OFF
16	2FH 2xLine Frq	ON
17	Standby Mode	OFF
18	Vertical	ON
19	BSE Blk Select	OFF
20	SSE Start Scan	OFF
21	SRSE Start Red Scan	OFF
22	GBE Guard Board	OFF
23	STE Scan time table	OFF
24	NSA Self Adaption	ON
25	V EHT comp	25" 110 29" 75
26	H EHT comp	25" 100 29" 35
27	H Centre	32
28	PWM Start	0

Item No	Adjustment item	Data Amount
29	D/A	0
30	V Blk time	28
31	H Blk time	37
32	Start V Scan	0
33	H Blk phase	61
34	V Scan width 0	0
35	V Scan width 1	0
36	Guard Band	0
37	Start red scan	0
38	Number fields	1
39	NI Non Interlace	OFF
40	NR Vsync Noise Red	ON
41	SSC with VBL	ON
42	Min lines/field	0
43	Max lines/field	0
44	AFC EHT comp	0
45	PLL Freq	6
46	VCR	ON
47	Gen Mode	OFF
48	HSWID	ON
49	Int H phase	Adj
50	PWM width	0
51	Noisy VCR	OFF
52	Killzip	OFF
53	tc3rd	OFF
54	Bandgap4 off	OFF
55	Bandgap off	OFF
56	Bandgap	0

TDA4780 (VIDEO PROC.)

Item No	Adjustment item	Data Amount
1	BRT	USER CONTROL
2	COL	USER CONTROL
3	PIC	USER CONTROL
4	HUE	USER CONTROL
5	R GAIN	40
6	G GAIN	Adj
7	B GAIN	Adj
8	R LVL REF	31
9	G LVL REF	Adj
10	B LVL REF	Adj
11	PEAK DRV LIMIT	55
12	GAMMA	31
13	SCP ON=3LEV OFF=2LEV	OFF
14	DELAY	OFF
15	DATA BUFF	OFF
16	NTSC MATRIX	OFF
17	HDTV	OFF
18	FSBL	OFF
19	AUTO CUT OFF	ON
20	FSW 2 DIS	OFF
21	FSW 2	OFF
22	FSW 1 DIS	OFF
23	FSW 1	OFF
24	ADAPT BLACK	ON
25	Y HIGH 1V	OFF
26	MOD2	OFF
27	BLUE STRETCH	*
28	VM OUT	OFF
29	PEAK DRV ABS	ON
30	TIME CNST PEAK LIMIT	OFF

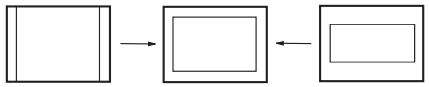
* Switch OFF for White balance Adj and Switch ON for Shipping Condition

DEFLECTION SYSTEM ADJUSTMENT

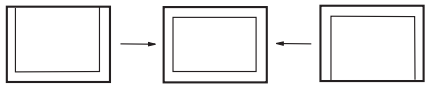
1. Enter into the service mode and select 'Deflect cont.'.The 'Deflect cont. SDA9361' adjustment menu will be displayed.
2. Select and adjust each item in order to get an optimum image.

Item No	Adjustment item	Data Amount
1	V Size	Adj
2	V Centrre	Adj
3	V Linearity	Adj
4	S Correction	Adj
5	H Size	Adj
6	Pin Amp	Adj
7	Up Corner Correction	Adj
8	Low Corner Correction	Adj
9	V Bow	Adj
10	Pin Phase	Adj
11	V Angle	Adj
12	HDE	ON
13	VR	0
14	RABL	ON
15	Blk Dis	OFF
16	2FH 2xLine Frq	ON
17	Standby Mode	OFF
18	Vertical	ON
19	BSE Blk Select	OFF
20	SSE Start Scan	OFF
21	SRSE Start Red Scan	OFF
22	GBE Guard Board	OFF
23	STE Scan time table	OFF
24	NSA Self Adaption	ON
25	V EHT comp	25" 110 29" 75
26	H EHT comp	25" 100 29" 35
27	H Centre	32
28	PWM Start	0

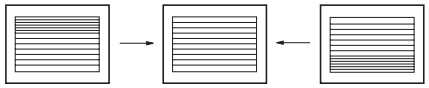
V SIZE



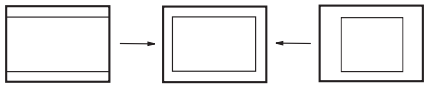
V POS



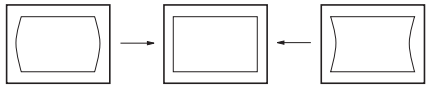
V LIN



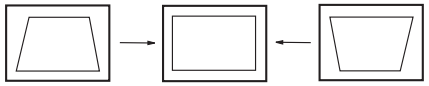
H SIZE



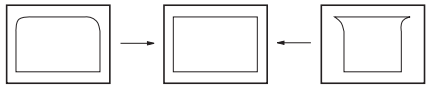
H PIN CUSH



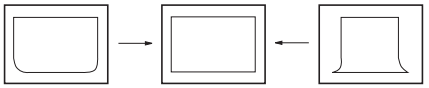
H TILT



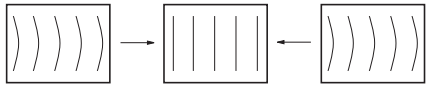
H UP COR



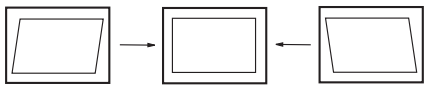
H LOWER COR



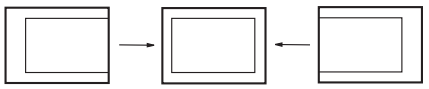
AFC V BOW



AFC V ANGLE



H POS



4-2. VOLUME ELECTRICAL ADJUSTMENTS

Sub Brightness Adjustment

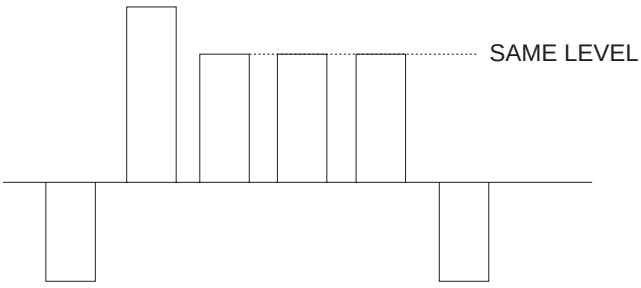
1. Enter Service Mode (Device Menu).
2. Select 'SUB ADJUST MENU'.

Sub adjustment
Sub Picture
Sub Colour
Sub Brightness
4/3 Center
PAP H-Center
PAP HWE-Offset
Menu/Text H-POS
PAT RGB Offset
PAT RGB Gain
Extra Framing Window

3. Adjust the value according to the following advice.

Sub Color Adjustment

1. Input a PAL color bar signal.
2. Connect an oscilloscope to CN3703.
3. Enter into 'SERVICE MODE'.
4. Choose 'SUB ADJUST'.
5. Enter into Sub Color mode.
6. Adjust data so that the right sides of the waveforms are of equal height.



4-3. TEST MODE 2:

Is available by pressing the Test button twice, OSD “TT” appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press `0' twice, or switch the TV into Standby Mode.

00	Switch Test Mode 2 off
01	Set minimum colour & picture to minimum
02	Direct access to Noise reduction (w/o OSD)
03	Set volume to 30%
04	`Service Mode' (Only in Pr.99 available)
05	`Production Mode' (Only in Pr. 99 available)
06	Set volume to 80%
07	Aging condition (Vol. min.; picture & brightness max.)
08	Shipping condition (Analog values are RESET due to factory setting. Prog. 1 is selected, TT mode off)
09	Language reset (Language menu appears when set is switched on)
10	Tenth entry is deleted
11	Direct access to balance (w/o OSD)
12	Direct access to HUE (w/o OSD)
13	Configuration menu
14	Display of Production information
15	Read factory setting from NVM, reads Volume, Balance,Treble, Bass,Brightness,Contrast,HUE, Sharpness,Colour values from ROM to the actual used values
16	Save actual Last Power Memory data
17	Preset label for AV sources
18	Text ON/OFF
19	Set volume to 50%
20	Tenth entry is deleted
21	Rotation coil test: -4 - > +4 - > 0
22	Operating timer and error monitor display
23	Direct access to sub brightness (w/o OSD)
24	Direct access to sub colour (w/o OSD)
25	Status menu display
26	Text caracter set selection: West Europe
27	Text caracter set selection: East Europe
28	Text caracter set selection: W. Europe-UK English
29	Text caracter set selection: West Europe Turkish
30	Tenth entry is deleted

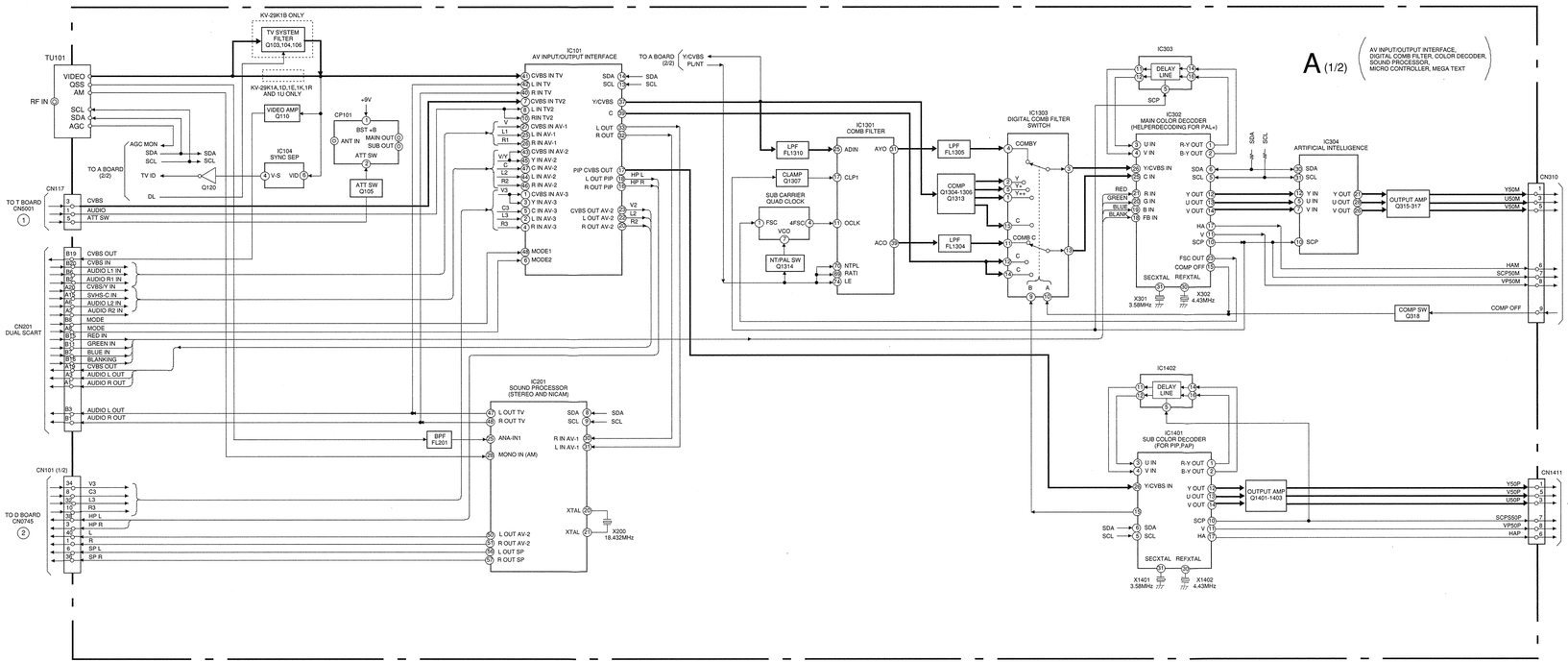
31	Reserved
32	Reserved
33	Multi PIP test
34	Photo mode test
35	Video muting ON/OFF
36	Reserved
37	Reserved
38	Screen Mode test (Not for 4:3 models)
39	Reset program table
40	Tenth entry is deleted
41	Picture minimum
42	Dolby on
43	Dolby off
44	Direct access to Sub Brightness adj. + Pic min.
45	Set NVM to protect mode
46	IR channel preseting mode
47	Headphone source selection (w/o OSD)
48	Direct access to AGO adjustment (w/o OSD)
49	Erase the NVM test byte (This byte detects already stored NVM's). After selecting this function, switch TV off and on. The NVM will be preset by the micro
50	Tenth entry is deleted
51	Strobe test
52	Internal use only (Show task)
53	Luminousponder/Al on/off
54	Direct access to VM (w/o OSD)
55	MTX Slicer control `Low pass' (only Sys.L)
56	MTX Slicer control `No compensation'
57	Megatext service menu ON
58	MTX small framing code window
59	MTX wide framing code window
60	Tenth entry is deleted
61	Set DOLBY default valves
62	ACI disable
63	ACI enable

64	Reset all I2C Slave commands
65	Reset stored error codes in NVM
66	Reset for PAL + local controler and sub controler
67	Direct access to Headphone volume (w/o OSD)
68	Ignore errors on
69	Ignore errors off
70	Tenth entry is deleted
71	Picture rotation ON/OFF
72	DOLBY mode wide
73	Megatext RGB textlevel one step decreased
74	Megatext RGB textlevel one step increased
75	Reserved for network ID
76	Default valve for SDA 9361
77	Default value for SDA 9280
78	Default values for PAL+
79	Default value for TDA 9144
80	Tenth entry is deleted
81	Default values for Features box

82	Default value for TDA 9170
83	Default value for SAA 7185
84	Default value for TDA 4780
85	Default value for TDA 9144
86	Default value for TDA 9143
87	Default value for SDA 9288
88	Text character set Russia/east
89	Text character set Russia/west
90	Tenth entry is deleted
91	DOLBY mode normal
92	ITP disable
93	ITP enable
94	Noise sequence `left'
95	Noise sequence `centre'
96	Noise sequence `right'
97	Noise sequence `surround'
98	Surround mode `off'
99	DOLBY mode `phantom'

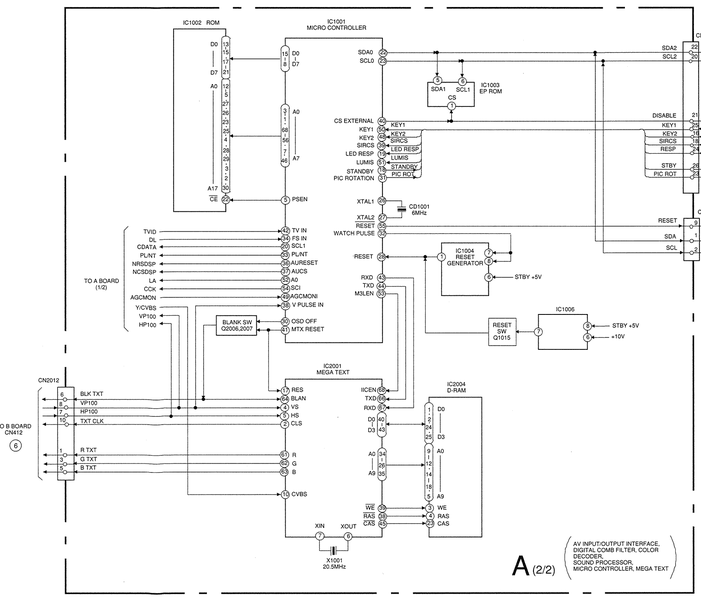
SECTION 5
DIAGRAMS

BLOCK DIAGRAM (1)



KV-29K1 KV-29K1

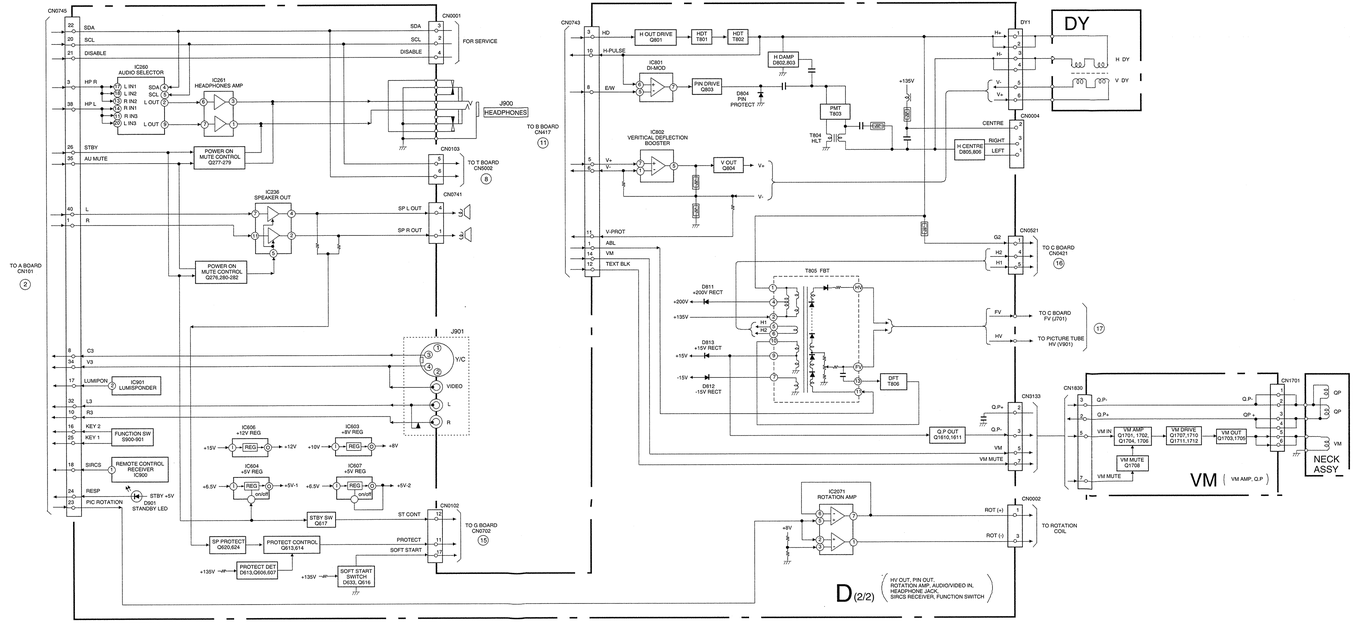
BLOCK DIAGRAM (2)



BLOCK DIAGRAM (3)

CN1810
TO A BOARD CN310 (3)
Y50M
U50M
V50M
SCP50M
HAM
VP50M
LPF FL1801
LPF
CLP SW Q1805
IC1801 MAIN A/D CONVERTER
0.72VPP
0.83VPP
0.82VPP
CLP
CLK
HREF
CEN
Y0-Y7
V0,V1,U0,U1
IC1803 FIELD MEMORY
IC1804-1807 PAP SWITCH
IC1808 DIGITAL NOISE REDUCE ZOOMING
IC1824 +5V REG
REG
IC1809 D/A CONVERTER
0.64VPP
1.05VPP
1.3VPP
LPF FL1803
VM AMP Q1801,1812
VM OFF SW Q1802
IC402 CRT DRIVER
0.31VPP
FSW1
SCP
FSW2
D415
CUT-OFF D410,Q415,416
CN419
CN3703
RGBAMP Q3710-3712
RGB DRIVE Q3704-3706 Q3716-3718
RGB OUT Q3701-3703 Q3707-3709
J701
TO D BOARD FV (T805) (17)
RV3702 H STAT
V901 PICTURE TUBE
CN3704
TO D BOARD CN0521 (16)
TO D BOARD HV (T805) (17)
RV3701 G2
C (RGB OUT)
TO A BOARD CN2012 (6)
CN412
R TXT
G TXT
B TXT
TXT BLK
HMEGA
VMEGA
TXTCLK
TO A BOARD CN1413 (5)
CN413
R PIP
G PIP
B PIP
BLK
BLK TXT
TO A BOARD CN115 (7)
RESET
SCL
SDA
CN1811
TO A BOARD CN1411 (4)
Y50P
U50P
V50P
SCP50P
VP50M
HAP
CLP SW Q1807
IC1811 PAP A/D CONVERTER
IC1817 FIELD MEMORY
IC1810 ASIC TIMING PAP, PAL PLUS
Q1810
IC1823 +5V REG
IC1819 +5V REG
IC1813 PIP PLL
IC1812 MAIN PLL
IC1815 DISPLAY PLL
IC1825 FREE RUN PLL
IC1814 CONTROLLER
13.5MHz
Q1808
RST
RESET SW Q1804,1809
IC1816 SOFTWARE
X1801 10MHz
SW Q411,412
IC403 DEFLECTION PROCESSOR
X401 24.576MHz
CN417
TO D BOARD CN0743 (11)
VM
H PULSE
V-PROT
ABL
HD
V+
V-
E/W
HREF SW Q1813
P26
IC1831 H PULSE GENERATOR
RC
B (A/D, D/A CONVERTER, DIGITAL NOISE REDUCER, CRT DRIVER, DEFLECTION PROCESSOR)
T (SUB TUNER)
TU5001
VIDEO
RF IN
AM
QSS
KV-29K1A,1D,1E,1K 1R AND 1U ONLY
KV-29K1B ONLY
TV SYSTEM FILTER Q5001,5002, Q5015,5012
MUTE SW Q5005
CN5001
CVBS
AUDIO
ATTSW
TO A BOARD CN117 (1)
KV-29K1B,1U ONLY
BPF CF5002
BPF CF5001, CF5003
IC5001 SIF
IN1
AF1 OUT
MUTE
IC5002 BAND CONTROL
BAND SW Q5009,5011
BAND SW Q5010
KV-29K1A,1B, 1D,1E,1K,1R ONLY
KV-29K1B ONLY
MUTE SW Q5006
CN5002
TO D BOARD CN0103 (8)

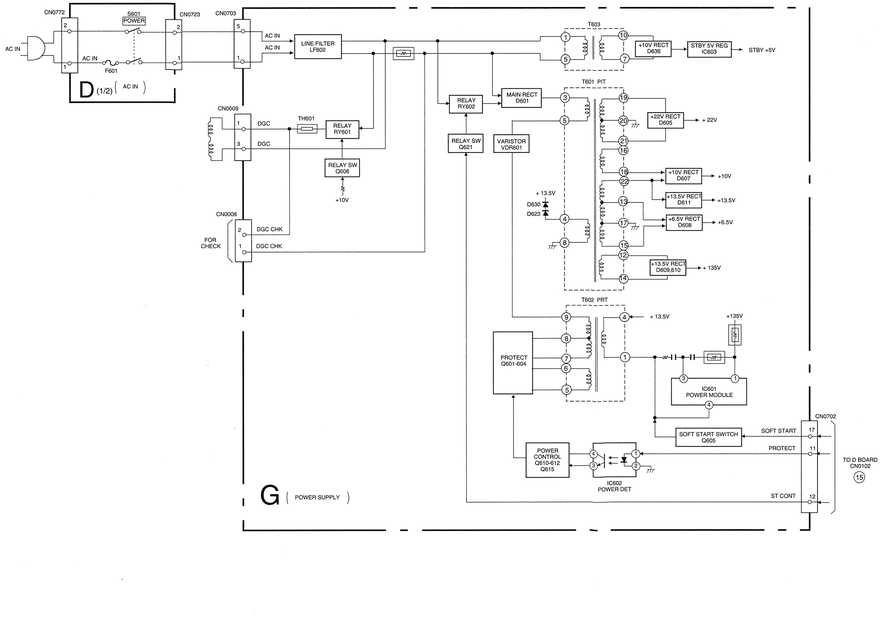
BLOCK DIAGRAM (4)



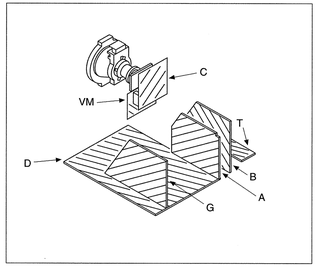
KV-29K1 KV-29K1

KV-29K1 KV-29K1

BLOCK DIAGRAM (5)



5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power ¼ W

- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth - ground.
- : earth - chassis.
- : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

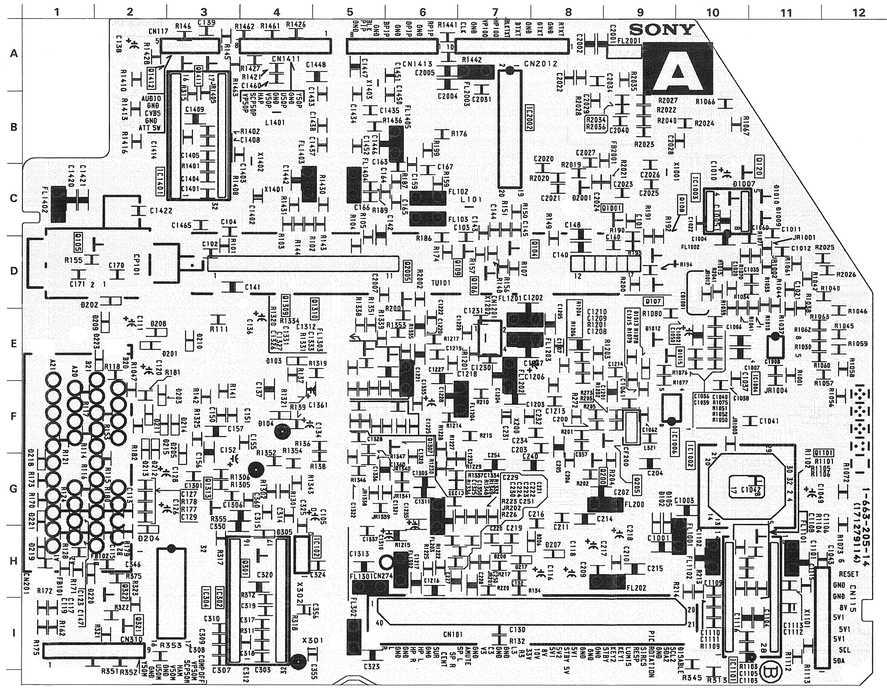
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

A BOARD

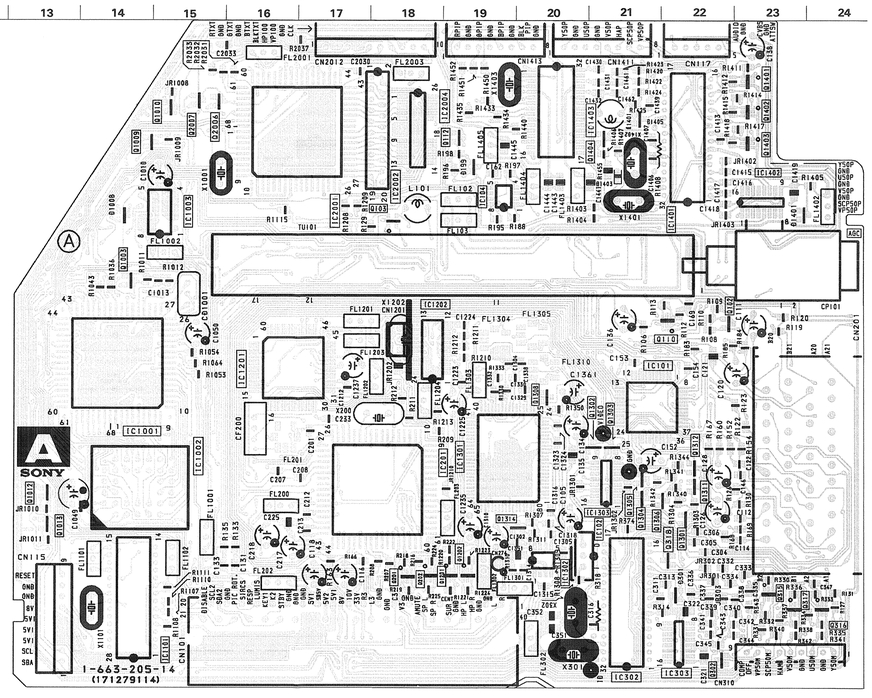
IC		Q1310	D-5
IC101	E-22	Q1311	G-22
IC102	H-4	Q1312	F-22
IC104	C-19	Q1313	G-3
IC201	G-19	Q1314	H-20
IC302	H-3	Q1401	A-23
IC303	I-22	Q1402	B-23
IC1001	F-14	Q1403	B-23
IC1002	G-10	Q1404	B-21
IC1003	C-10	Q1411	A-3
IC1004	E-11	Q1412	A-2
IC1006	F-10	Q2005	D-6
IC1301	G-20	Q2006	B-15
IC1302	H-21	Q2007	B-15
IC1303	G-21	DIODE	
IC1401	C-2	D102	G-9
IC1402	C-23	D103	E-4
IC2001	C-17	D104	F-4
IC2004	B-18	D105	G-9
TRANSISTOR		D199	C-19
Q102	E-23	D200	H-7
Q103	C-18	D201	E-2
Q104	D-8	D202	D-2
Q105	D-1	D203	F-3
Q106	D-7	D204	H-2
Q107	D-9	D205	F-3
Q108	C-10	D206	H-8
Q109	D-7	D207	H-8
Q110	E-22	D208	E-2
Q112	B-19	D209	E-2
Q120	C-11	D210	E-3
Q200	G-8	D211	F-2
Q205	F-9	D212	G-2
Q301	H-4	D213	G-2
Q302	I-22	D214	F-3
Q315	H-23	D215	F-2
Q316	I-24	D217	H-7
Q317	I-24	D218	G-1
Q321	I-2	D219	H-1
Q322	I-2	D220	H-1
Q1001	C-9	D221	G-1
Q1301	H-22	D223	E-2
Q1302	F-21	D301	H-22
Q1303	F-21	D1007	C-10
Q1304	G-22	D1008	C-14
Q1305	G-21	D1009	C-11
Q1306	G-22	D1010	C-11
Q1307	F-6	D1012	E-9
Q1308	F-20	D1401	C-23
Q1309	D-4		

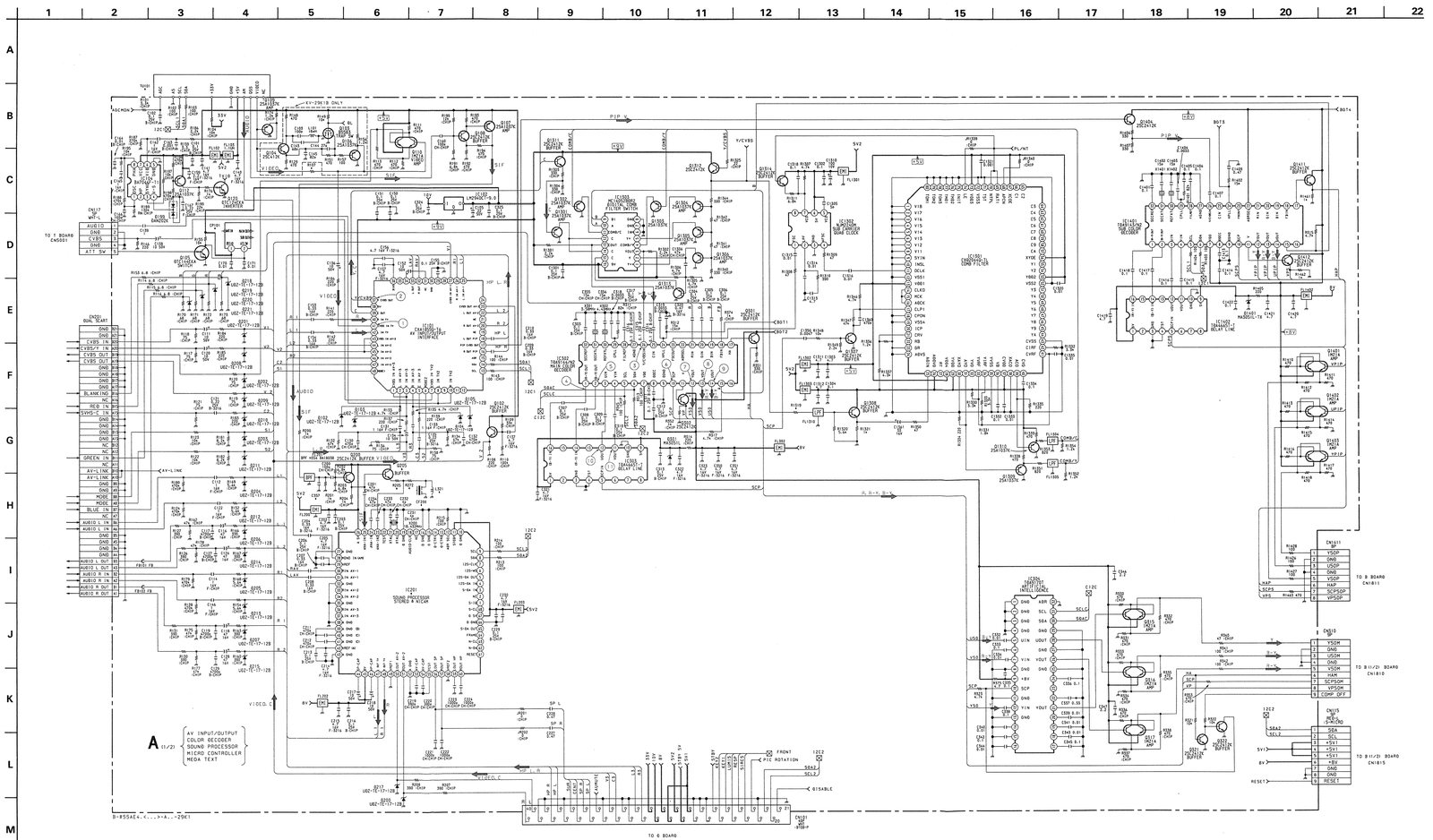
A AV INPUT/OUTPUT, DIGITAL COMB FILTER,COLOR DECODER SOUND PROCESSOR, MICRO CONTROLLER, MEGA TEXT

A Board < Conductor Side >



A Board < Component Side >





WAVEFORMS A BOARD

① PAL 1.0 Vp-p (H)	① SECAM 1.0 Vp-p (H)	② PAL 2.0 Vp-p (H)
② SECAM 2.0 Vp-p (H)	③ PAL 1.0 Vp-p (H)	③ SECAM 1.2 Vp-p (H)
④ 0.6 Vp-p (H)	⑤ 0.7 Vp-p (H)	⑥ 4.5 Vp-p (H)
⑦ 1.0 Vp-p (H)	⑧ 1.0 Vp-p (H)	⑨ 1.4 Vp-p (H)
⑩ 1.5 Vp-p (H)	⑪ 1.0 Vp-p (H)	

A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

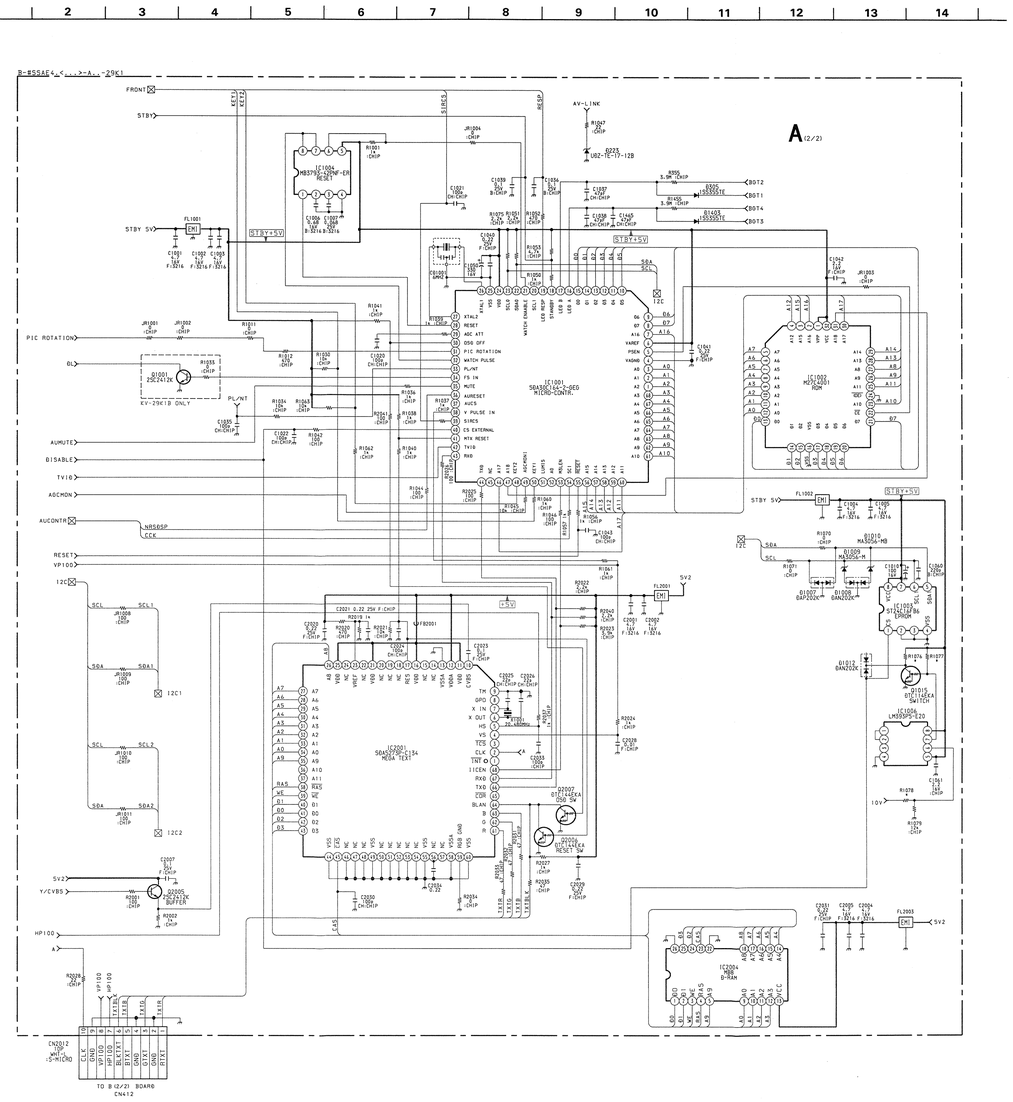
Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q102	1.9	4.7	1.3
Q105	0.08	4.5	0.08
Q107	4.4	1.7	5.0
Q108	1.8	4.4	1.2
Q112	4.3	4.9	5.0
Q120	4.6	0.1	0.1
Q301	0.5	8.0	0.4
Q302	-	8.0	0.3
Q318	0.1	5.2	0.1
Q1201	8.6	5.0	9.2
Q1202	0.7	5.0	9.2
Q1301	1.9	-	0.2
Q1302	-	-	0.6
Q1303	0.8	-	1.5
Q1304	2.2	-	0.1
Q1305	2.0	-	0.1
Q1306	1.7	-	-
Q1307	-	3.4	0.1
Q1308	3.5	4.7	2.9
Q1309	0.9	0.1	1.6
Q1310	1.0	0.1	1.6
Q1311	4.5	9.0	3.9
Q1312	4.5	9.0	-
Q1313	4.6	0.7	0.1
Q1314	4.8	4.7	4.3
Q1404	4.5	7.8	3.8
Q1411	0.5	8.0	0.6
Q1412	0.1	8.0	0.1
Q1201	2.6	8.6	2.1
Q1202	2.6	8.6	2.1

A (1/2) BOARD IC VOLTAGE TABLE

IC Voltage Table					
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC201	4	0.5	IC1201	4	4.7
	5-6	4.7		13	4.7
	7	2.4		31	4.7
	8-9	4.7		35	4.7
	20	2.4		37	2.7
	24	4.4		39	2.2
	25	8.8		40	2.7
	26	4.4		41	4.7
	28	3.8		45	4.8
	29	2.7		29	2.7
	30-31	3.8		30-31	3.8
	39-42	3.8		39-42	3.8
	44	6.2		44	6.2
	45	8.0		45	8.0
	46	7.0	IC1303	1	5.0
	47-48	3.8		5	0.6
	50-51	3.7		3.0	3.0
	53-54	3.8		14	1.4
	56-57	1.2		16	1.2
	61	4.8	IC1401	1-2	2.0
IC302	1-2	2.0		3-4	2.4
	3-4	2.4		5	3.5
	5	3.0		6	4.0
	6	4.0		7	7.8
	7	8.0		8	5.0
	8	5.0		10	0.8
	10	0.5		12	2.4
	12	3.2		13-14	2.6
	13-14	2.6		15	8.0
	15	8.0		17	0.3
	17	0.3		22	7.8
	19	1.6		24	3.6
	21	1.0		26	3.3
	23-24	4.0		28	3.5
	26	3.7		29	4.3
	28	3.5		30	2.6
	29	5.0		31	2.6
	30	2.5		32	3.8
	31	2.5			
	32	2.0			

A BOARD * MARK

Model / Ref. No.	29K1A	29K1B	29K1D	29K1E	29K1K	29K1R	29K1U
C357	39PF	39PF	39PF	39PF	39PF	39PF	—
CF200	6.5MHz TRAP	6.5MHz TRAP	6.5MHz TRAP	6.5MHz TRAP	6.5MHz TRAP	6.5MHz TRAP	—
IC201	MSP3400C-PS-C6-T	MSP3410B-PS-F7-T-ND	MSP3400C-PS-C6-T	MSP3410B-PS-F7-T-ND	MSP3400C-PP-C6-T-ND	MSP3400C-PP-C6-T-ND	MSP3410B-PS-F7-T-ND
L321	100uH	100uH	100uH	100uH	100uH	100uH	—
Q205	2SC2412K-T-146-R	2SC2412K-T-146-R	2SC2412K-T-146-R	2SC2412K-T-146-R	2SC2412K-T-146-R	2SC2412K-T-146-R	—
R107	CONDUCTOR CHIP	—	CONDUCTOR CHIP	CONDUCTOR CHIP	CONDUCTOR CHIP	CONDUCTOR CHIP	CONDUCTOR CHIP
R205	330	330	330	330	330	330	—
R272	CONDUCTOR CHIP	CONDUCTOR CHIP	CONDUCTOR CHIP	CONDUCTOR CHIP	CONDUCTOR CHIP	CONDUCTOR CHIP	—
R1076	—	10K	—	—	—	—	—
R1077	—	10K	—	—	—	—	—
R1078	—	10K	—	—	—	—	—
R1319	560	560	560	560	560	560	680
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)



A (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table

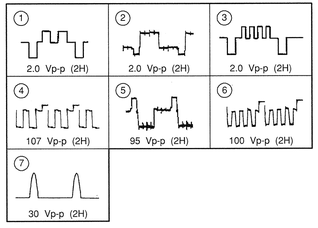
Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC101	1-5	4.6	1101	1	4.8
	7-8	4.6		2	1.1
	10	4.6		4	0.9
	17	4.6		5	0.3
	23	4.6		6-7	2.4
	29	4.6		8	1.4
	31	4.6		9	4.7
	34	4.6		10	1.7
	36	4.6		11	1.5
	38	9.0		16	4.0
	40-47	4.6		18-20	4.7
IC1001	5	2.4	2001	21	2.5
	6	4.8		22	2.3
	19	3.6		2	0.4
	20	0.1		5	0.3
	24	4.8		6-7	1.6
	26	2.1		8	4.0
	27	2.3		10	1.0
	28	4.6		11-12	4.7
	30	0.1		16	4.7
	31-32	2.4		21	4.7
	33	4.8		23	2.9
	36	4.1		25	4.7
	38	0.1		66	4.7
	39	0.6		68	4.7
	40	4.8			
	41	0.1			
	42	4.8			
	43	4.4			
	44	4.1			
	48	4.8			
	49	2.2			
	50	4.8			
	52	4.8			
	54	4.8			

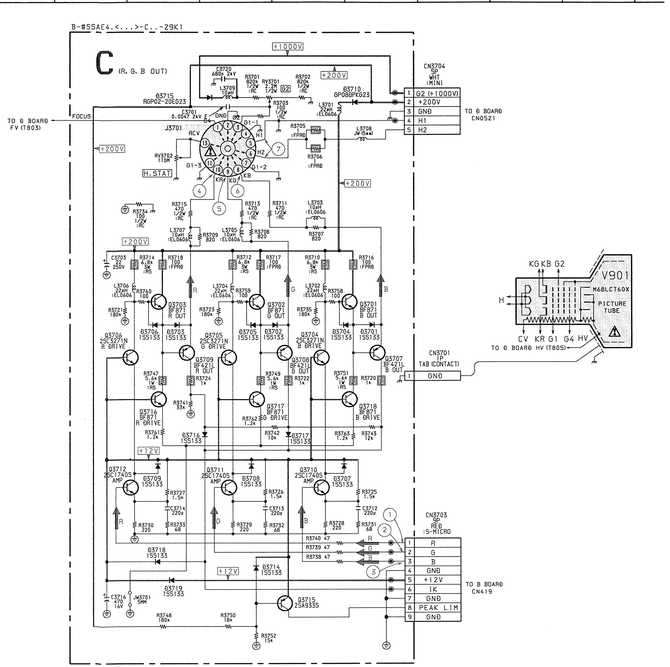
A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q1001	0.1	0.7	0.1
Q1004	0.1	0.7	-
Q1101	3.3	5.0	2.6

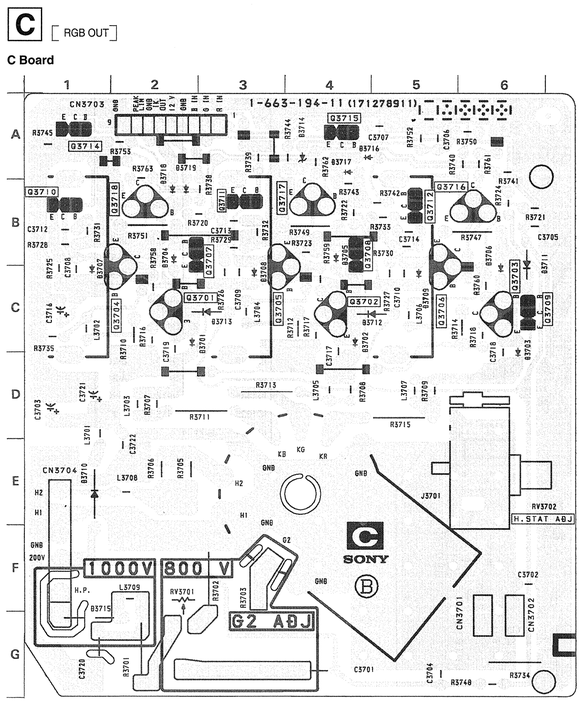
WAVEFORMS C BOARD





C [RGB OUT]

C Board



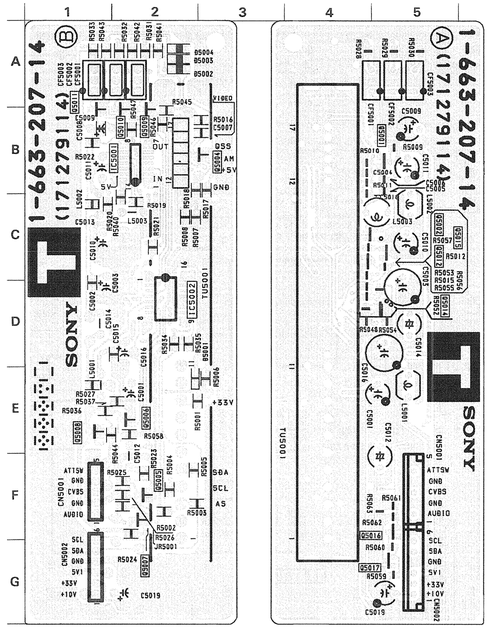
C BOARD

TRANSISTOR	
Q3701	C-2
Q3702	C-4
Q3703	C-6
Q3704	C-2
Q3705	C-3
Q3706	C-5
Q3707	B-3
Q3708	B-4
Q3709	C-6
Q3710	B-1
Q3711	B-3
Q3712	B-5
Q3715	A-4
Q3716	B-6
Q3717	B-4
Q3718	B-2
DIODE	
D3701	C-2
D3702	C-4
D3703	D-6
D3704	B-2
D3705	B-4
D3706	B-6
D3707	C-1
D3708	C-3
D3709	C-5
D3710	E-1
D3711	B-6
D3712	C-5
D3713	C-3
D3714	A-4
D3715	G-1
D3716	A-5
D3717	A-4
D3718	A-2
D3719	A-2
VARIABLE RESISTOR	
RV3701	F-2
RV3702	E-6

T [SUB TUNER]

T Board < Conductor Side >

T Board < Component Side >

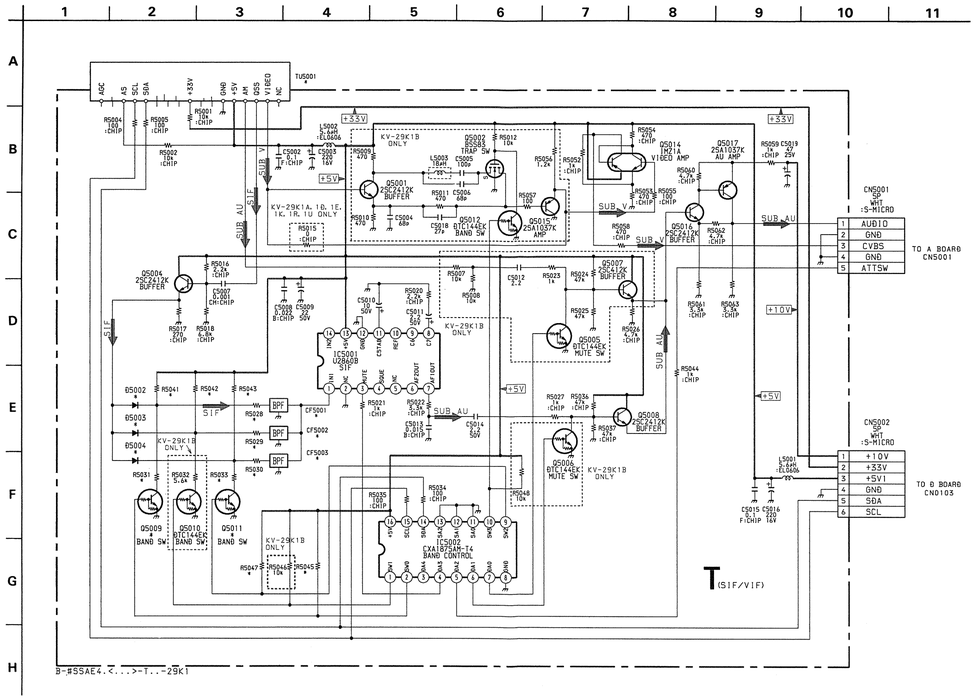


T BOARD

IC	
IC5001	B-2
IC5002	D-3
TRANSISTOR	
Q5001	B-5
Q5002	C-6
Q5004	B-3
Q5005	G-2
Q5006	F-2
Q5007	F-2
Q5008	H-2
Q5009	F-1
Q5009	B-2
Q5011	B-2
Q5012	B-1
Q5014	D-6
Q5015	D-6
Q5016	H-5
Q5017	H-5
DIODE	
D5002	A-3
D5003	A-3
D5004	A-3

T BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC5001	1	1.8
	3	4.7
	4	3.4
	6-7	2.4
	8-10	2.1
	11	4.4
	13	4.9
	14	1.8
IC5002	2	4.0
	3	0.5
	4	4.7
	5	2.8
	6	0.5
	7	4.7
	9	0.1
	14	4.4
	15	4.0
	16	5.0



T BOARD * MARK

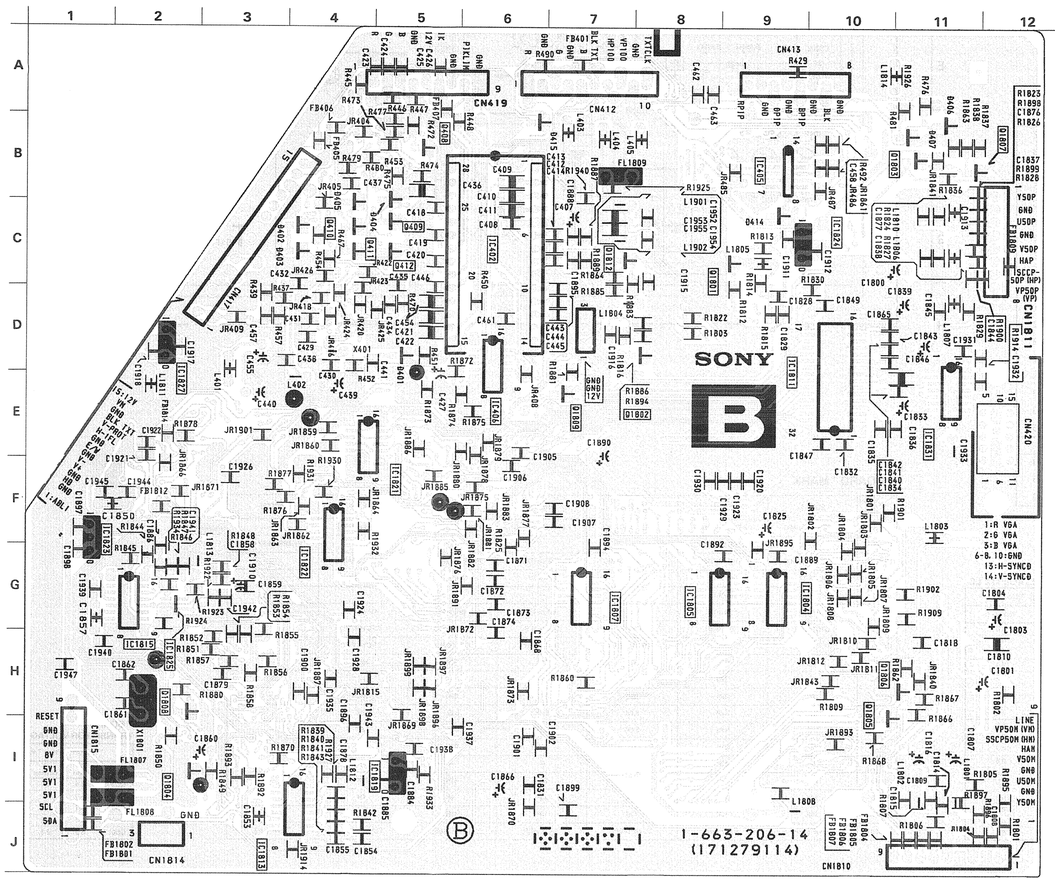
Ref. No. \ Model	29K1A	29K1B	29K1D	29K1E	29K1K	29K1R	29K1U
CF5001	FILTER CERAMIC	FILTER CERAMIC	FILTER CERAMIC	FILTER CERAMIC	FILTER CERAMIC	FILTER CERAMIC	—
CF5002	—	FILTER CERAMIC	—	—	—	—	FILTER CERAMIC
CF5003	FILTER CERAMIC	FILTER CERAMIC	FILTER CERAMIC	FILTER CERAMIC	FILTER CERAMIC	FILTER CERAMIC	—
D5002	MA73-TX	MA73-TX	MA73-TX	MA73-TX	MA73-TX	MA73-TX	—
D5003	—	MA73-TX	—	—	—	—	MA73-TX
D5004	MA73-TX	MA73-TX	MA73-TX	MA73-TX	MA73-TX	MA73-TX	—
Q5009	DTC144ER	DTC144ER	DTC144ER	DTC144ER	DTC144ER	DTC144ER	—
Q5111	DTC144ER	DTC144ER	DTC144ER	DTC144ER	DTC144ER	DTC144ER	—
R5028	390	390	390	390	390	390	—
R5029	—	390	—	—	—	—	390
R5030	390	390	390	390	390	390	—
R5031	5.6K	5.6K	5.6K	5.6K	5.6K	5.6K	—
R5033	5.6K	5.6K	5.6K	5.6K	5.6K	5.6K	—
R5041	22K	22K	22K	22K	22K	22K	—
R5042	—	22K	—	—	—	—	—
R5043	22K	22K	22K	22K	22K	22K	—
R5045	10K	10K	10K	10K	10K	10K	—
R5047	10K	10K	10K	10K	10K	10K	—
TU5001	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)

T BOARD TRANSISTOR VOLTAGE TABLE

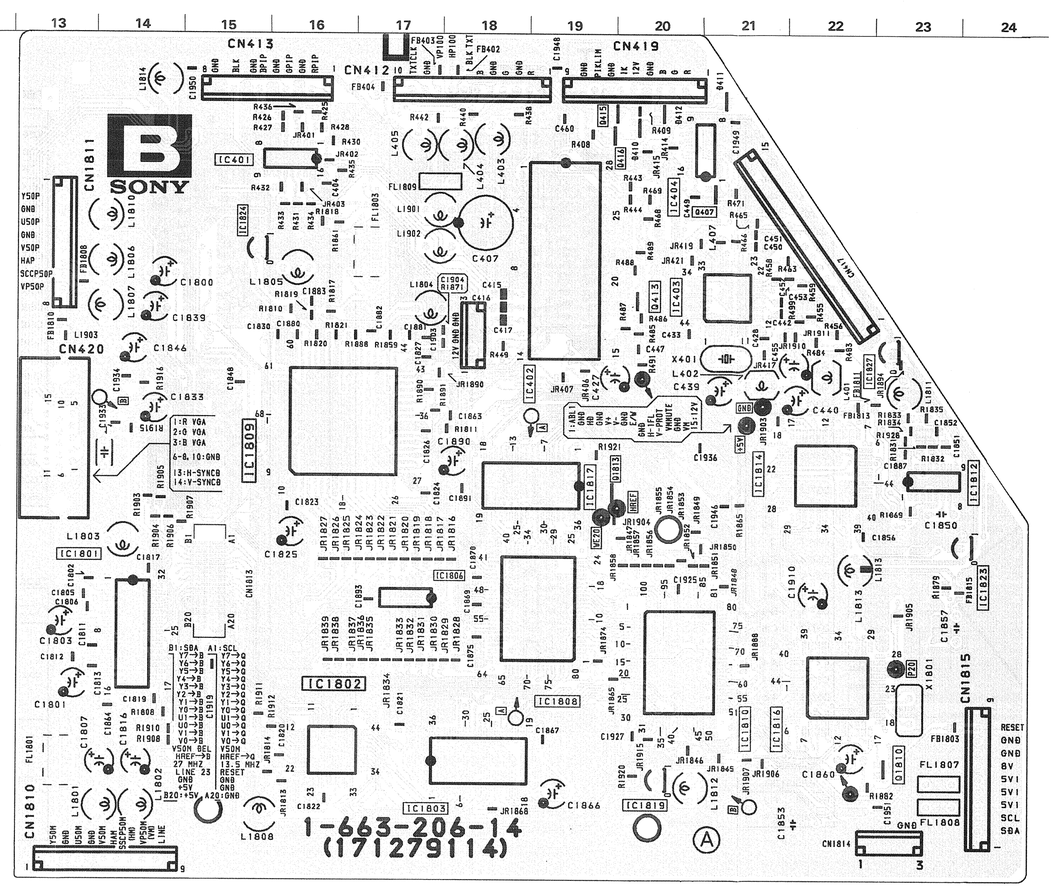
Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q5008	2.4	5.0	1.8
Q5009	4.0	-	-
Q5011	0.1	4.8	-
Q5016	1.8	8.2	1.3
Q5017	8.2	2.3	9.0

B [A/D, D/A CONVERTER, DIGITAL NOISE REDUCER, CRT DRIVER, DEFLECTION PROCESSOR]

B Board < Conductor Side >

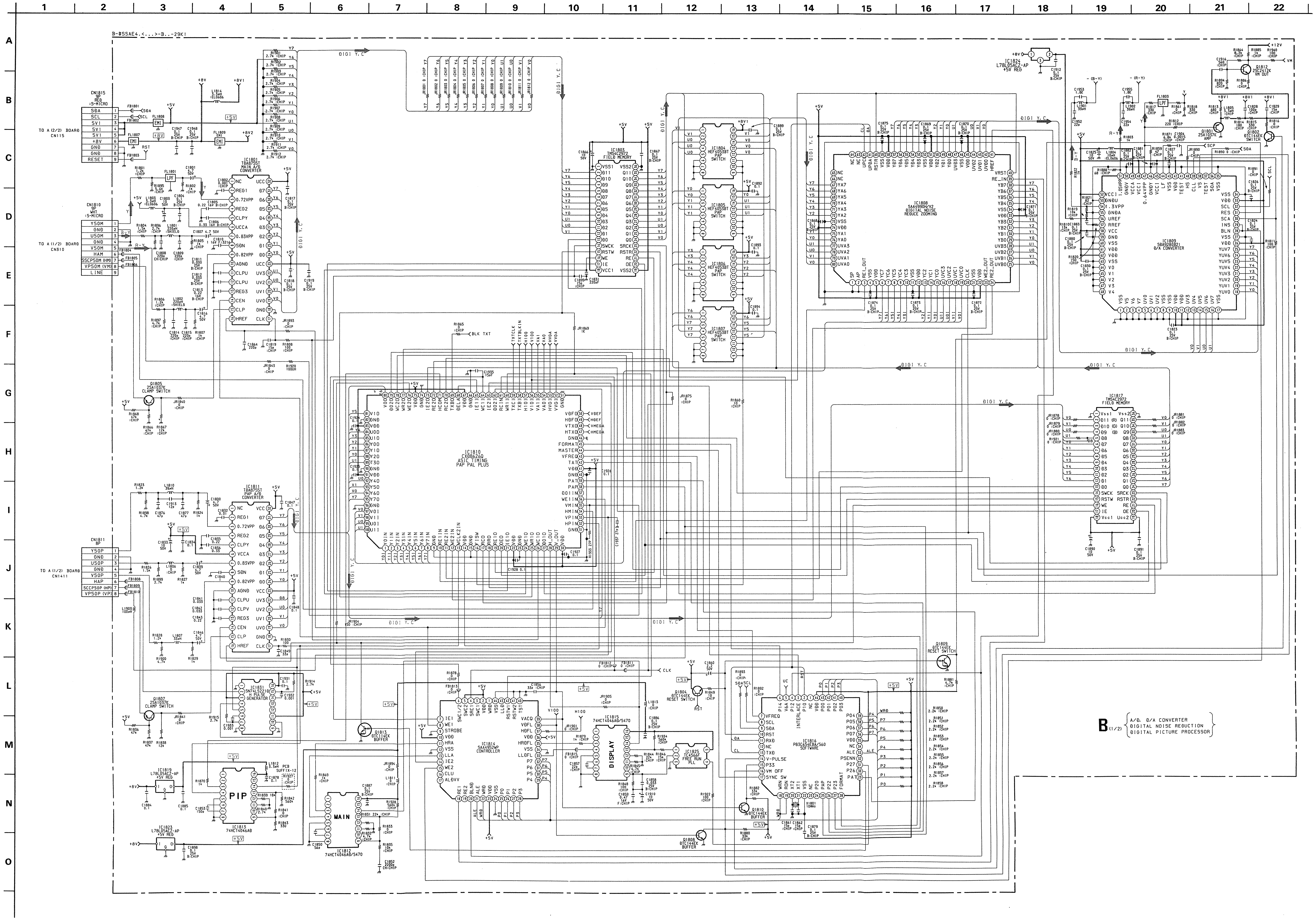


B Board < Component Side >



B BOARD

IC		TRANSISTOR	
IC402	C-6	Q411	C-4
IC403	D-20	Q412	C-5
IC1801	G-13	Q415	A-19
IC1803	I-17	Q416	B-20
IC1804	G-9	Q1801	C-8
IC1805	G-8	Q1802	D-8
IC1806	G-18	Q1804	I-2
IC1807	G-7	Q1805	H-10
IC1808	H-19	Q1807	B-12
IC1809	E-15	Q1808	H-2
IC1810	I-21	Q1809	E-7
IC1811	D-9	Q1810	I-23
IC1812	F-24	Q1812	C-8
IC1813	J-3	Q1813	F-20
IC1814	F-21	DIODE	
IC1815	H-2	D401	D-5
IC1816	H-22	D402	C-3
IC1817	E-19	D403	C-3
IC1819	I-5	D410	B-20
IC1823	F-1	D411	A-21
IC1824	C-10	D412	A-20
IC1825	H-2	D415	B-7
IC1831	E-11		


B-#SSAE4.<...>-B..-29KI
CN1815 9P RED :S-MICRO
TO A (2/2) BOARD CN115
CN1810 9P WHT :S-MICRO
TO A (1/2) BOARD CN310
CN1811 8P
TO A (1/2) BOARD CN1411
IC1801 TDA8755T MAIN A/D CONVERTER
IC1811 TDA8755T PAP A/D CONVERTER
IC1803 TMS4C2972 FIELD MEMORY
IC1804 HEF4053BT PAP SWITCH
IC1805 HEF4053BT PAP SWITCH
IC1806 HEF4053BT PAP SWITCH
IC1807 HEF4053BT PAP SWITCH
IC1808 SAA4990H/V2 DIGITAL NOISE REDUCE ZOOMING
IC1809 SDA9280B21 D/A CONVERTER
IC1810 CXD8626Q ASIC TIMING PAP PAL PLUS
IC1817 TMS4C2972 FIELD MEMORY
IC1824 L78L05ACZ-AP +5V REG
IC1831 SN74LS221D H PULSE GENERATOR
IC1813 74HCT4046AD PIP
IC1812 74HCT4046AD/S470 MAIN
IC1819 L78L05ACZ-AP +5V REG
IC1823 L78L05ACZ-AP +5V REG
IC1814 SAA4952WP CONTROLLER
IC1815 74HCT4046AD/S470 DISPLAY
IC1825 TC4S66F FREE RUN PLL
IC1816 P83C654EBA/560 SOFTWARE
Q1805 2SA1037K CLAMP SWITCH
Q1807 2SA1037K CLAMP SWITCH
Q1801 2SA1037K AMP
Q1802 DTC144EK SWITCH
Q1812 2SC2412K VM OUT
Q1804 DTC144EK RESET SWITCH
Q1809 DTC144EK RESET SWITCH
Q1813 DTC114EK BUFFER
Q1810 DTC144EK BUFFER
Q1808 DTC144EK BUFFER
DIGI Y. C

B (1/2) { A/D. D/A CONVERTER
DIGITAL NOISE REDUCTION
DIGITAL PICTURE PROCESSOR }

B BOARD
TRANSISTOR VOLTAGE TABLE

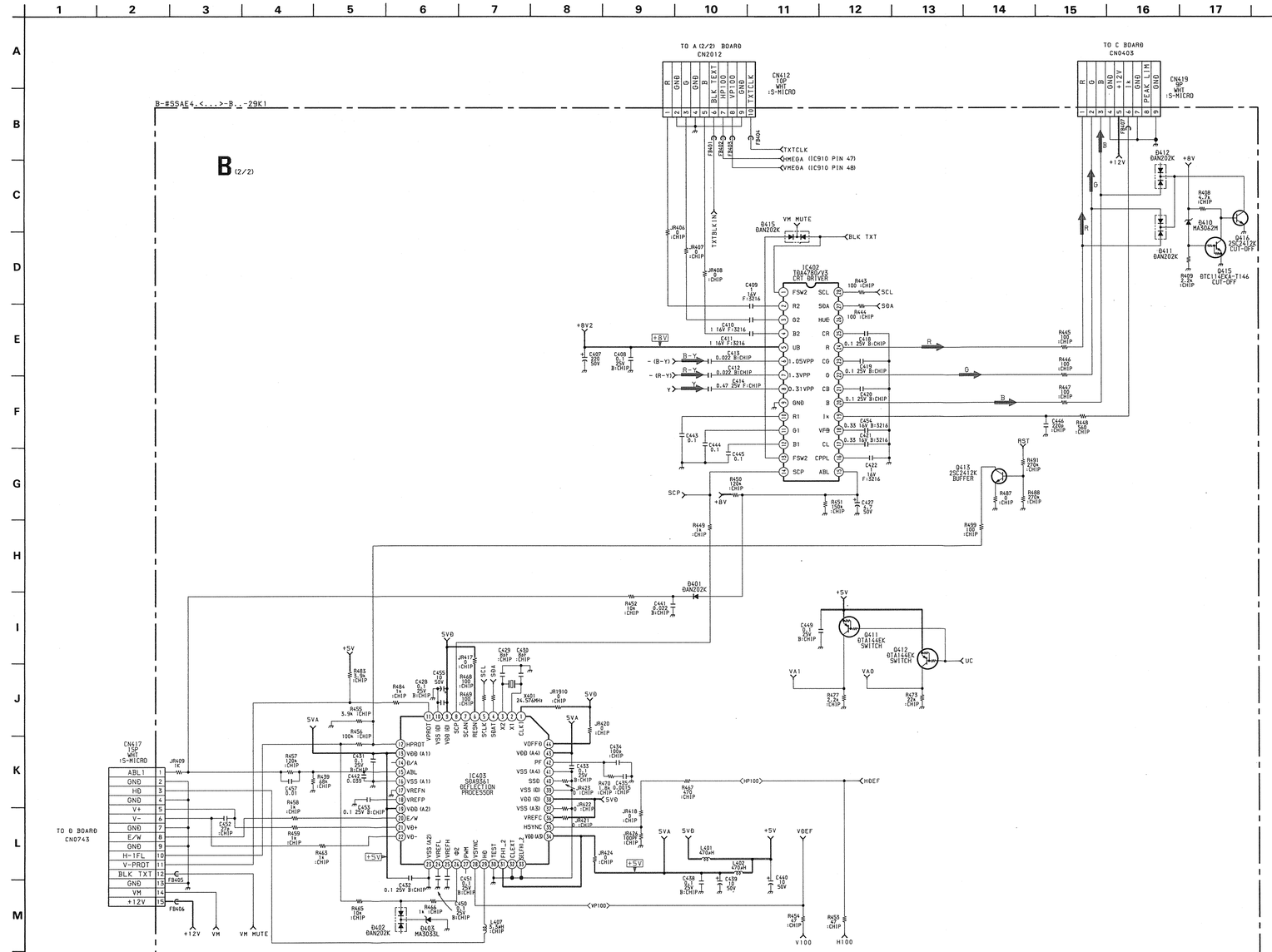
Transistor Voltage Table			
Ref No	B Base	C Collector	E Emitter
Q411	0.1	4.8	4.8
Q412	0.1	4.8	4.8
Q415	1.8	0.1	-
Q416	0.1	5.6	-
Q1801	0.1	-	0.9
Q1802	4.0	0.1	0.1
Q1804	0.3	4.8	0.1
Q1805	2.5	1.3	0.7
Q1807	2.5	1.3	0.7
Q1808	0.1	4.7	0.1
Q1809	0.1	0.1	0.1
Q1810	0.1	4.8	-
Q1812	0.5	10.5	-
Q1813	0.1	3.7	0.1

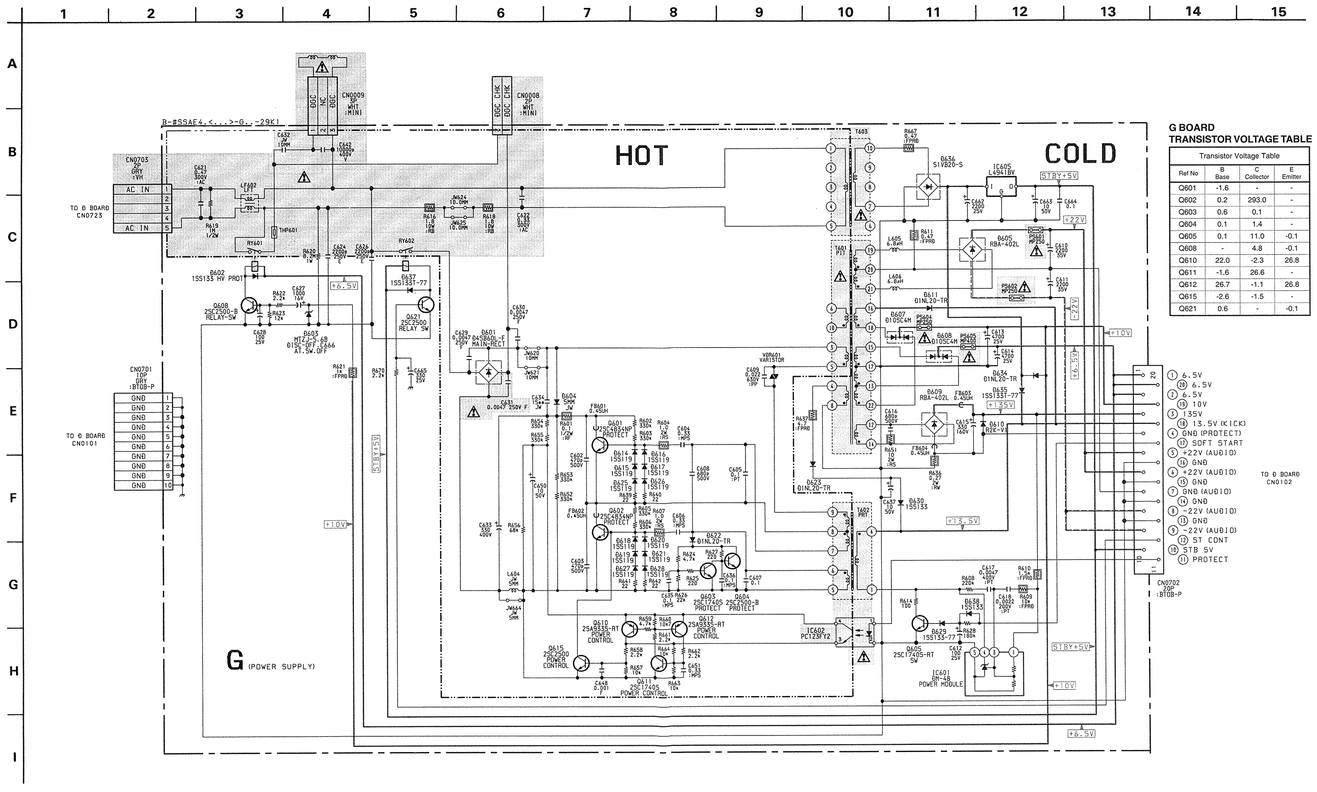
B (1/2) BOARD
IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC1812	3-4	2.4
	6-7	0.7
	9	4.6
	11-13	4.7
	14	0.3
	16	5.0
IC1813	3-4	2.4
	6-7	0.7
	9	4.6
	11-13	4.7
	14	0.3
	16	5.0
IC1815	1	5.0
	2	2.3
	3-4	2.5
	6-7	0.8
	9-11	3.0
	12	4.5
	13	3.0
	14	0.4
	15	0.2
	16	5.2
IC1821	2	2.5
	4-5	2.3
	12	2.0
	14	2.0
	15	2.6
	16	8.0
IC1822	2	2.9
	4-5	2.6
	12	2.3
	14	2.1
	15	2.8
	16	8.0

B (2/2) BOARD IC VOLTAGE TABLE

IC Voltage Table		
Ref No	Pin No	Voltage (V)
IC402	2-4	5.0
	5	7.8
	6-7	4.0
	8	3.7
	10-12	5.0
	14	0.7
	16	4.7
	17	5.1
	18	1.8
	19	7.5
	20	2.5
	21	3.3
	22	2.8
	23	3.3
	24	2.9
	25	3.3
	27	4.0
	28	3.8
IC405	5	3.2
	9	3.2
	13-14	3.2
IC406	16	4.8





G BOARD
TRANSISTOR VOLTAGE TABLE

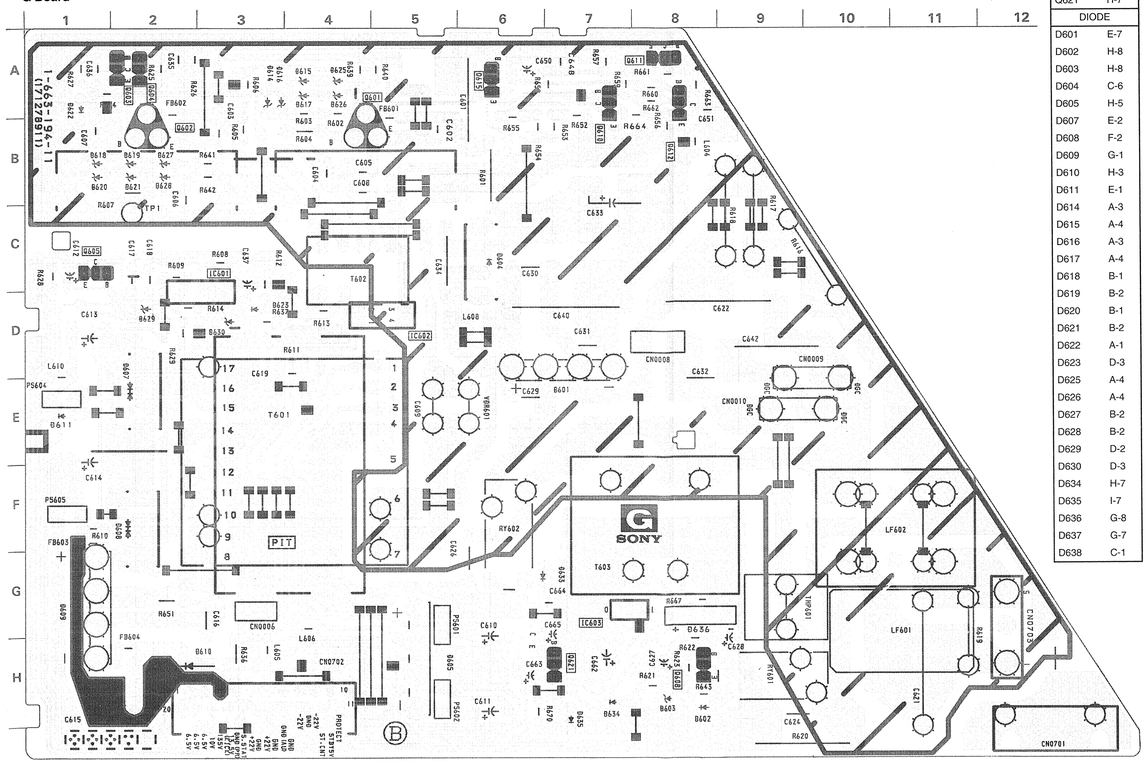
Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q601	-1.6	-	-
Q602	0.2	293.0	-
Q603	0.6	0.1	-
Q604	0.1	1.4	-
Q605	0.1	11.0	-0.1
Q608	-	4.8	-0.1
Q610	22.0	-2.3	26.8
Q611	-1.6	26.6	-
Q612	26.7	-1.1	26.8
Q615	-2.6	-1.5	-
Q621	0.6	-	-0.1

NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

G [POWER SUPPLY]

G Board



G BOARD

IC	
IC601	C-3
IC602	D-5
IC605	G-7
TRANSISTOR	
Q601	A-5
Q602	B-2
Q603	B-2
Q604	B-2
Q605	C-1
Q608	H-8
Q610	B-7
Q611	A-8
Q612	B-8
Q615	A-6
Q621	H-7
DIODE	
D601	E-7
D602	H-8
D603	H-8
D604	C-6
D605	H-5
D607	E-2
D608	F-2
D609	G-1
D610	H-3
D611	E-1
D614	A-3
D615	A-4
D616	A-3
D617	A-4
D618	B-1
D619	B-2
D620	B-1
D621	B-2
D622	A-1
D623	D-3
D625	A-4
D626	A-4
D627	B-2
D628	B-2
D629	D-2
D630	D-3
D634	H-7
D635	I-7
D636	G-8
D637	G-7
D638	C-1

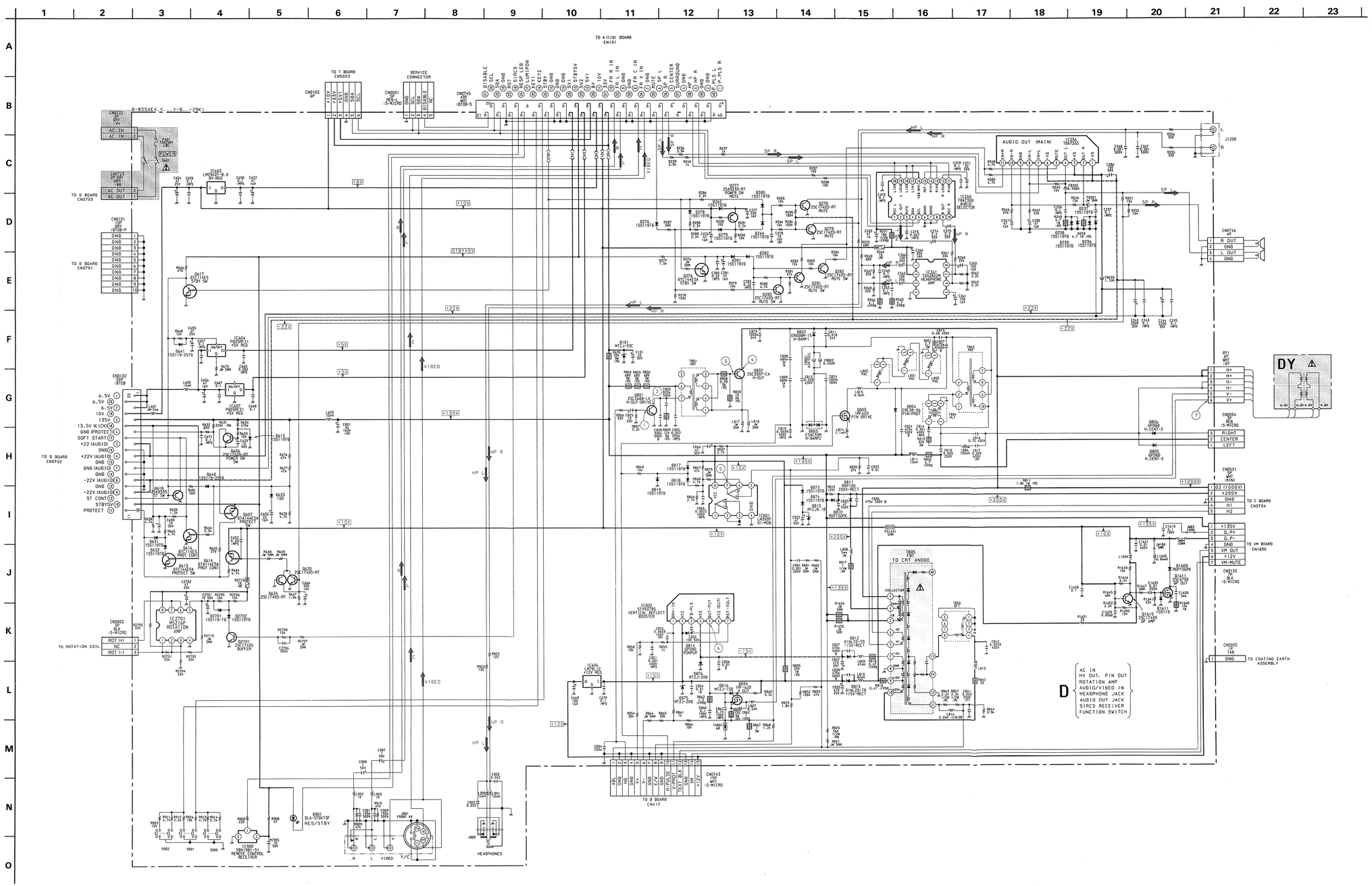
WAVEFORMS D BOARD

① 3.5 Vp-p (2H)	② 210 Vp-p (2H)	③ 11 Vp-p (2H)
④ 1.1K Vp-p (2H)	⑤ 10 Vp-p (2H)	⑥ 62 Vp-p (2H)
⑦ 100 Vp-p (2H)		

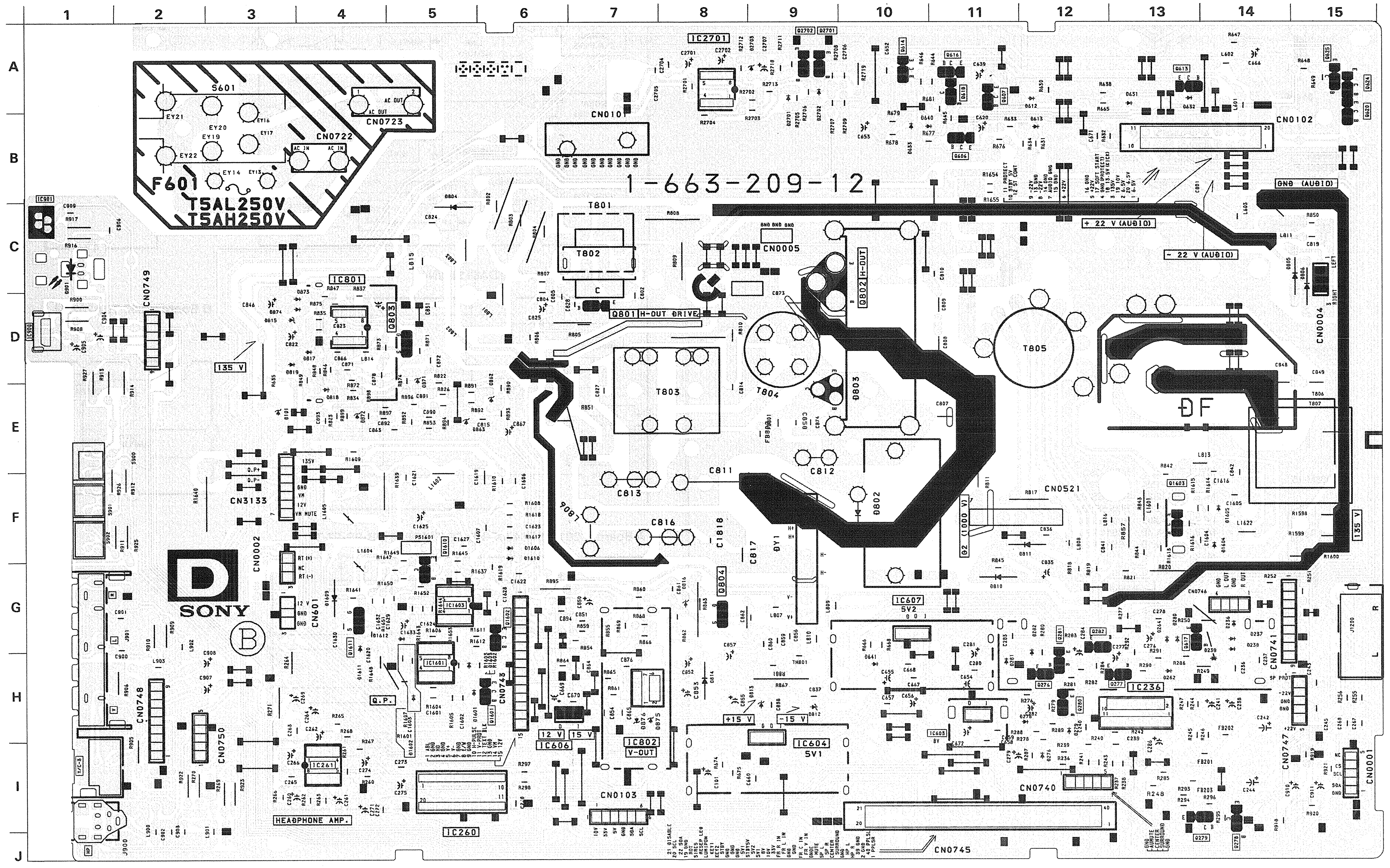
D BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q276	0.7	4.0	-
Q277	10.0	-	9.7
Q278	-1.3	-	-
Q279	-1.3	-	-1.3
Q280	0.4	0.7	-
Q281	0.7	-	-
Q282	0.7	-	-
Q801	-1.0	101.0	-
Q802	-	136.0	-
Q803	9.0	15.0	-
Q804	11.3	0.1	-1.3
Q606	0.5	4.8	0.3
Q607	4.8	1.6	4.8
Q613	13.5	-	-
Q614	10.0	9.0	10.0
Q616	0.7	-	-
Q617	0.7	3.5	-
Q618	3.5	-	-
Q620	-	10.0	-
Q624	-	10.0	-
Q2701	-	2.3	-
Q1610	-0.5	2.2	-
Q1611	0.2	43.4	-


TO A (1/2) BOARD CN101
TO T BOARD CN5002
SERVICE CONNECTOR
CN2045 60P WHT I-BTOB-S
CN1003 6P
CN5001 3P RCB-L I5-MICRO
CN7722 2P SP-SP ORG VH
CN7723 2P SP-SP ORG VH
AC IN
AC OUT
POWER
F601 1.6A/250V T1.6A
TO G BOARD CN0703
TO G BOARD CN0701
TO G BOARD CN0702
CN0101 10P ORG I-BTOB-P
GND 1
GND 2
GND 3
GND 4
GND 5
GND 6
GND 7
GND 8
GND 9
GND 10
IC603 LM2931Z-8.0 8V REG
IC604 PQ05RF21 5V REG
IC605 PQ09RF21 9V REG
IC606 LM78L12 +12V REG
IC607 PQ12RF21 12V REG
IC608 VERTICAL DEFLECT BOOSTER
IC609 POWER CONTROL
IC610 PQ05RF21 5V REG
IC611 PQ09RF21 9V REG
IC612 PQ12RF21 12V REG
IC2701 MC3359P ROTATION AMP
Q2701 2SC1740S BUFFER
CN0102 5P WHT I-BTOB
CN0602 6P BLK I5-MICRO
ROT (+) 1
NC 2
ROT (-) 3
TO ROTATION COIL
CN0603 6P BLK I5-MICRO
R 1
L 2
GND 3
VIDEO 4
Y/C 5
GND 6
HEADPHONES
J603
RM-X4S REMOTE CONTROL RECEIVER
IC5300
S001 SLA-57GK15F RES/STBY
S002 S003 S004 S005 S006 S007 S008 S009 S010 S011 S012 S013 S014 S015 S016 S017 S018 S019 S020 S021 S022 S023 S024 S025 S026 S027 S028 S029 S030 S031 S032 S033 S034 S035 S036 S037 S038 S039 S040 S041

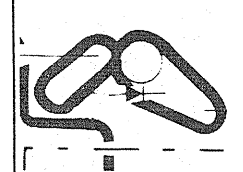
D Board



KV-29K1 KV-29K1

D BOARD

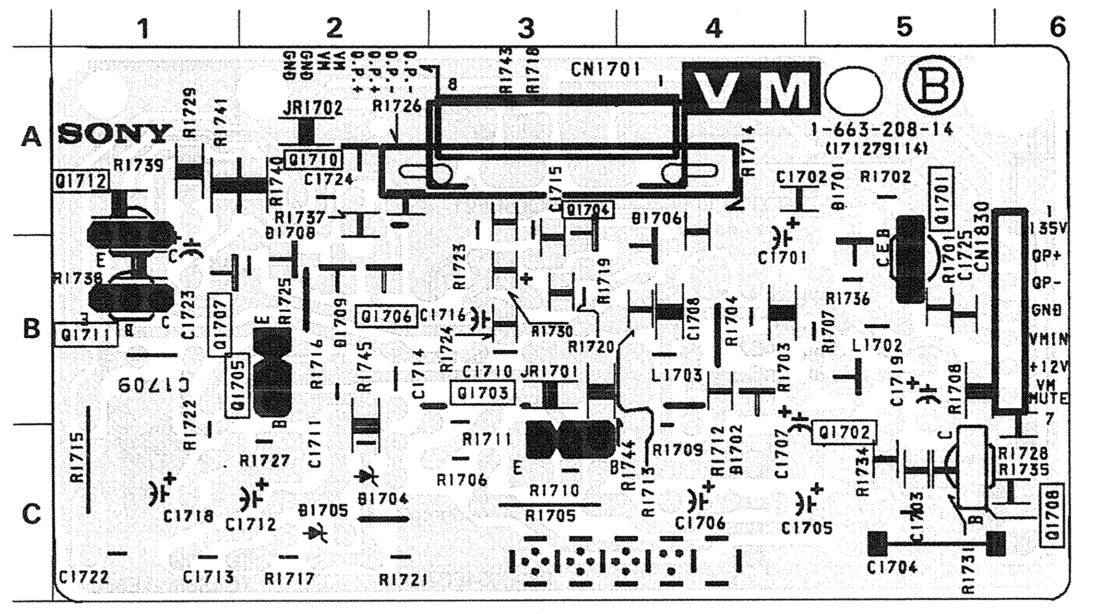
IC		D239	G-14
IC236	H-13	D262	H-13
IC260	I-5	D264	G-13
IC261	I-4	D276	I-12
IC603	H-11	D278	H-12
IC604	H-9	D279	H-12
IC606	H-7	D280	G-13
IC607	G-10	D281	H-12
IC801	C-4	D282	G-12
IC802	H-8	D613	B-12
IC900	D-1	D631	A-13
IC2701	A-8	D632	A-14
TRANSISTOR		D633	B-11
Q276	H12	D640	B-10
Q277	H-13	D641	H-10
Q278	I-14	D802	F-10
Q279	I-14	D803	E-10
Q280	H-12	D804	B-5
Q281	G-12	D805	C-15
Q282	G-13	D806	C-15
Q606	B-11	D810	G-11
Q607	A-11	D811	F-12
Q613	A-13	D812	H-9
Q614	A-10	D813	H-9
Q616	A-11	D814	H-8
Q617	G-13	D815	D-3
Q618	A-11	D816	G-8
Q620	A-15	D817	D-4
Q624	A-15	D818	E-4
Q801	D-7	D819	D-3
Q802	C-10	D871	D-5
Q803	D-5	D873	D-4
Q804	G-8	D874	D-3
Q1610	F-5	D875	H-7
Q1611	G-4	D876	H-7
Q2701	A-9	D901	C-1
DIODE		D1609	G-4
D101	E-3	D1611	H-4
D236	G-14	D2701	A-9
D237	G-14	D2702	A-9
D238	G-14		



NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

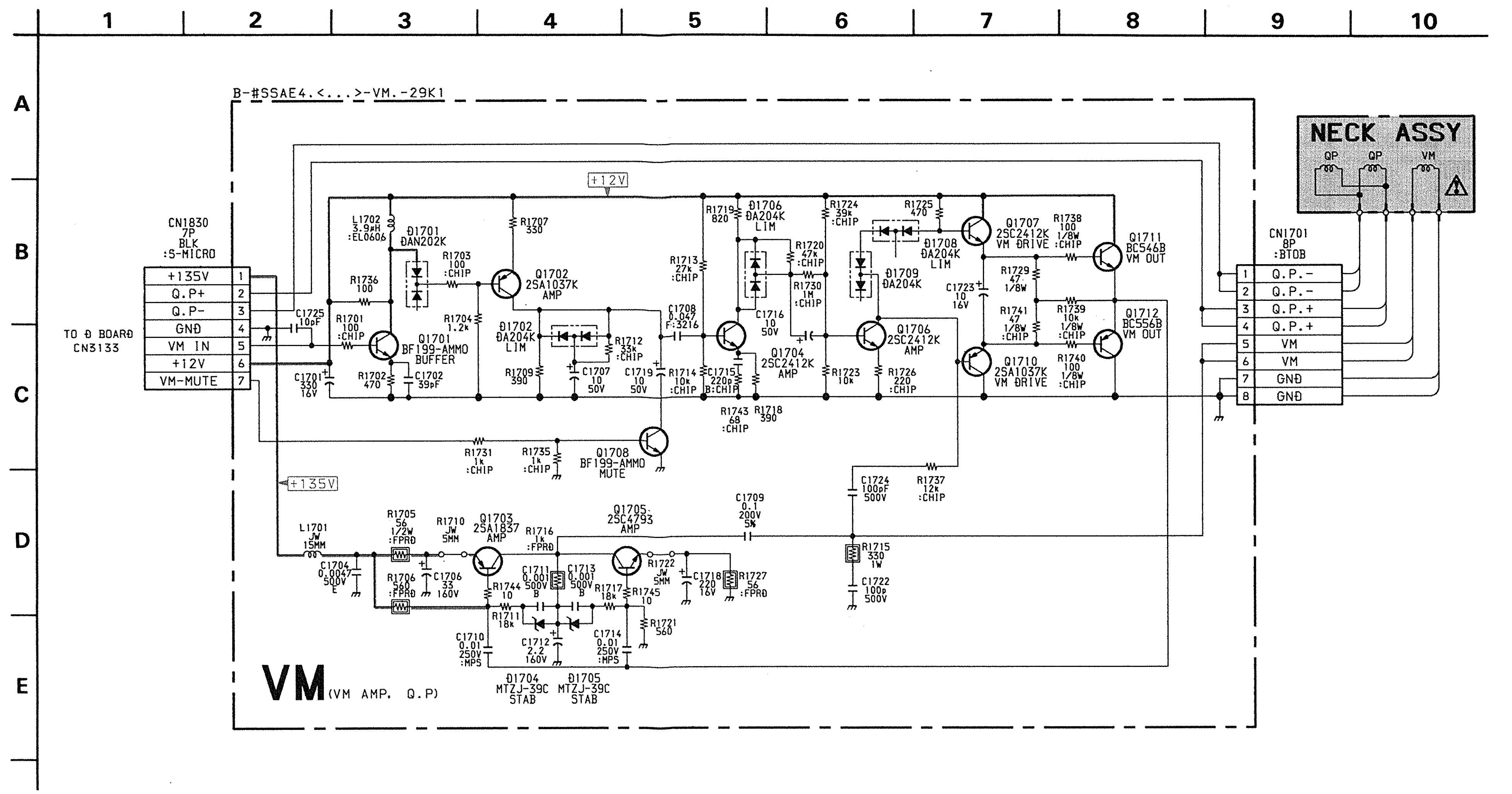
VM [VM OUT, Q.P]

VM Board



VM BOARD

TRANSISTOR	
Q1701	A-5
Q1702	C-5
Q1703	B-3
Q1704	A-3
Q1705	B-2
Q1706	B-2
Q1707	B-1
Q1708	C-6
Q1710	A-2
Q1711	B-1
Q1712	A-1
DIODE	
D1701	A-5
D1702	C-4
D1704	C-2
D1705	C-2
D1706	A-4
D1708	B-2
D1709	B-2



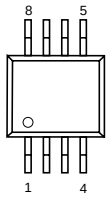
VM BOARD TRANSISTOR VOLTAGE TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q1701	0.8	0.7	2.1
Q1702	1.8	0.2	1.9
Q1703	24.0	13.3	24.0
Q1704	0.5	1.2	0.4
Q1705	0.1	12.3	-
Q1706	0.4	1.1	0.3
Q1707	1.5	2.1	1.4
Q1708	-	-	-
Q1710	1.1	-	1.2
Q1711	1.4	2.1	1.3
Q1712	1.3	1.2	-

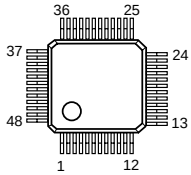
5-4. SEMICONDUCTORS

BA7046F
BA7046F-T1
MB3793-42PNF
MB3793-42PNF-ER
NJM2240M



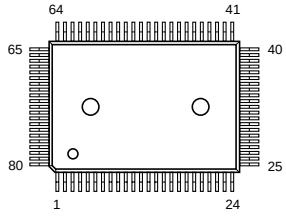
(TOP VIEW)

CXA1855Q-T6



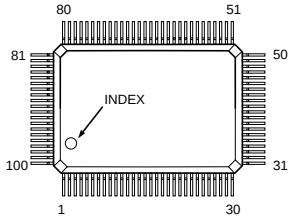
(TOP VIEW)

CXD2044Q-TL
SAA4990H/V2



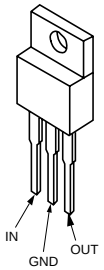
(MARKING SIDE VIEW)

CXD8626Q

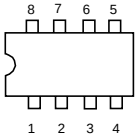


(TOP VIEW)

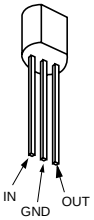
LM2940CT-9.0
LM2940T-8.0
LM2940T-9.0
L4941BV
TEA7605



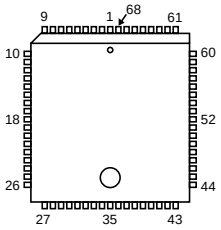
LM393P
M5216P
ST24C16FB6
TDA2822M
UPC393C



LM78L05ACZ
LM78L12ACZ
L78L05ACZ-AP
L78L12ACZ-AP

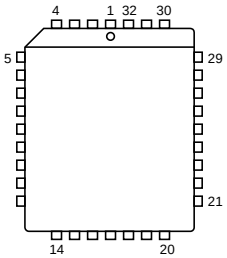


MSP3400C-PS-C6-T-ND
MSP3410B-PS-F7-T-ND
SDA30C164-GEG
SDA5273-C126-GEG



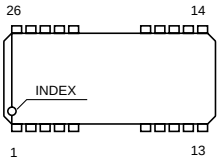
(TOP VIEW)

M27C4001-15C1
M27C4001-15C1-AE401



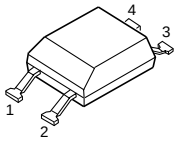
(TOP VIEW)

MB814400C-70PJN-ER

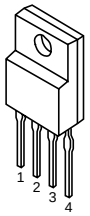


(TOP VIEW)

PC123F2
PC123FY2

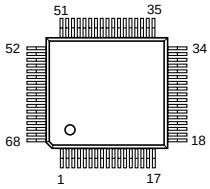


PQ05RF21



1 : V IN
2 : V OUT
3 : GND
4 : ON/OFF CONTROL

P83C654EBA/560
SDA9280A41



(TOP VIEW)

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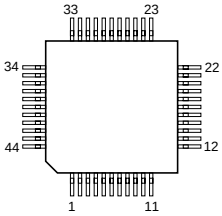
SDA9361



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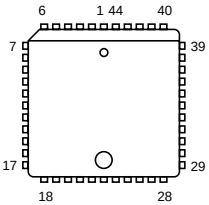
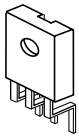


(TOP VIEW)

SBX1981-51



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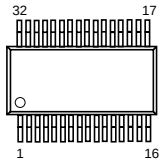
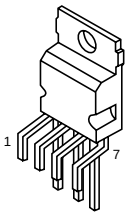
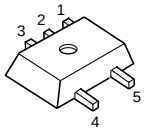


(TOP VIEW)

STV9379



TC4S66F
TC4S66F-TE85L



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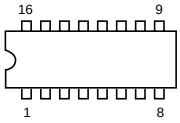
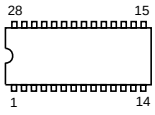


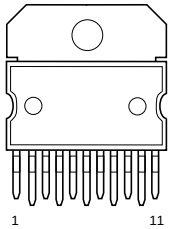
(TOP VIEW)

TDA4780/V3



(TOP VIEW)

TDA7265



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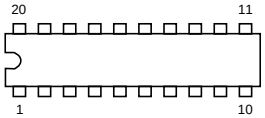
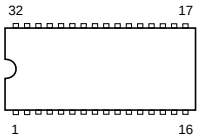


(TOP VIEW)

TDA9143/N2
TDA9144/N2
TDA9170T



(TOP VIEW)

TMS4C2972-26DTR
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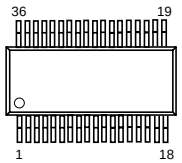

(TOP VIEW)

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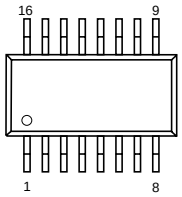

(TOP VIEW)

U2860B-BF-PG3
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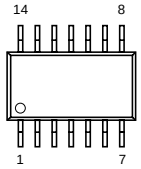
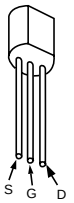
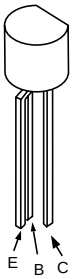


(TOP VIEW)

BC546B
BC556B

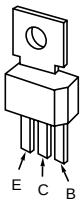


BF199
BF199-AMMO

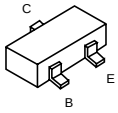


BF421L-AMMO
2SC2500-B
2SC2551-O
2SC2551O-TPE2

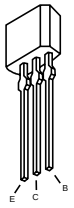
BF871-127



DTA144EK	DTC144EK
DTA144EK-T146	DTC144EK-T146
DTC114EK	DTC144EKA-T146
DTC114EKA-T146	2SA1037K-T-146-R
DTC123EK	2SA1162-G
DTC123EK-T146	2SC2412K-QR
DTC124EKA-T146	2SC2412K-T-146-R



DTA144ESA	2SA933AS-RT
DTA144ESA-TP	2SA933AS-QRT
DTC114ESA-TP	2SA933S-RT
DTC144ESA-TP	2SC1740S-RT
2SA1175-HFE	2SC2785-HFE
2SA733-K	



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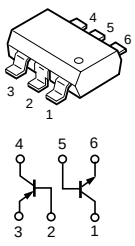
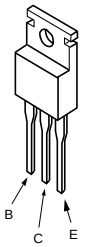


IRF620



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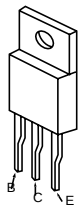

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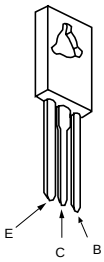
2SC2688-LK
2SC3271-N



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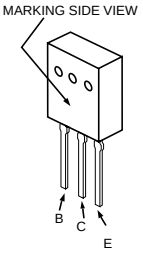

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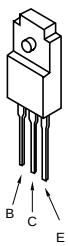

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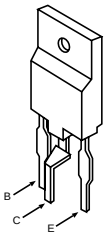
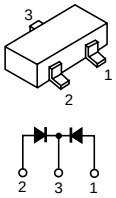


DAN202K
DAN202K-T-146



DAP202K
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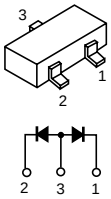

DA204K
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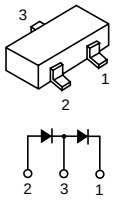

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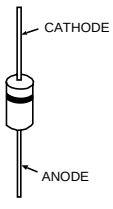
D1NL20-TA	RGP02-20EG23
D1NL20-TR	RGP02-20EL-6394
EGP20G	RGP10GPKG23
EL1Z	RGP15GPKG23
GP08D	S2LA20F
GP08DPKG23	1SS133T-77
MTZJ-T-77-9.1	1SS83
MTZJ-T-77-9.1A	1SS83TD



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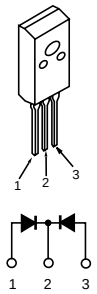
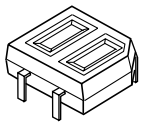
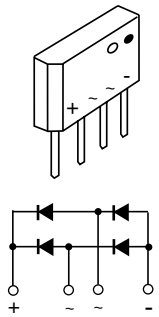


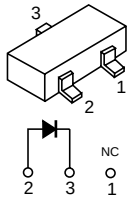
MA73-TX



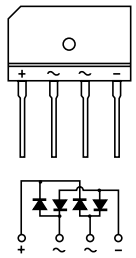
S1VB20-S
S1VB40



MA3030-H(TX) MA3056M-TX
MA3033-L MA3062M-TX
MA3033L-TX RD5.6M-B2



D4SB60L
D4SB60L-F
RBA-402L



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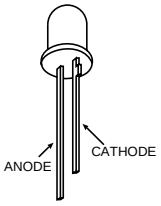
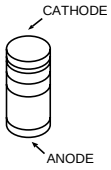
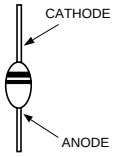


MA3051L-TX



ERC38-06



MTZJ-T-77-13B MTZJ-33C
MTZJ-T-77-15B MTZJ-39C
MTZJ-T-77-2.2A RD15ES-B2
MTZJ-T-77-33C RD5.6ESB2
MTZJ-T-77-39C RD9.1ESB2
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MTZJ-T-77-9.1B 1SS119-25TD
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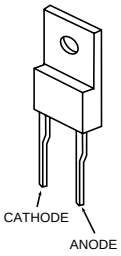
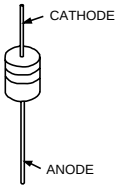
ERD08M-15





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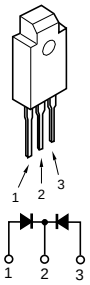
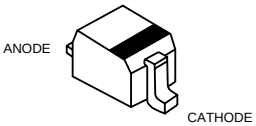
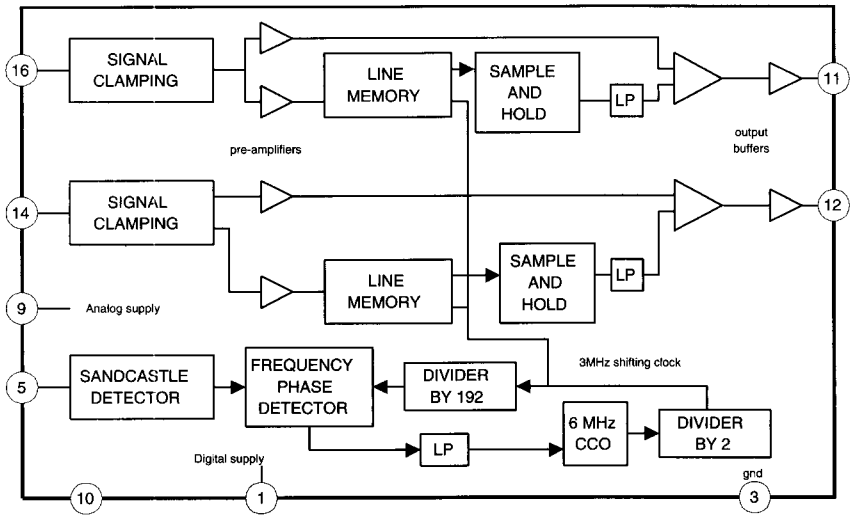


RD12SB2
UDZ-TE-17-12B

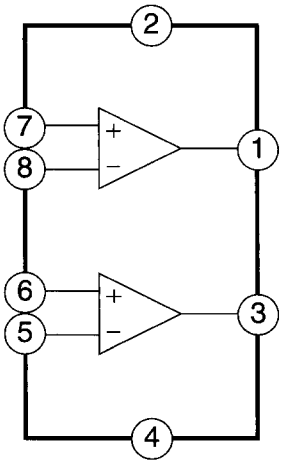


5-5. IC BLOCK DIAGRAMS

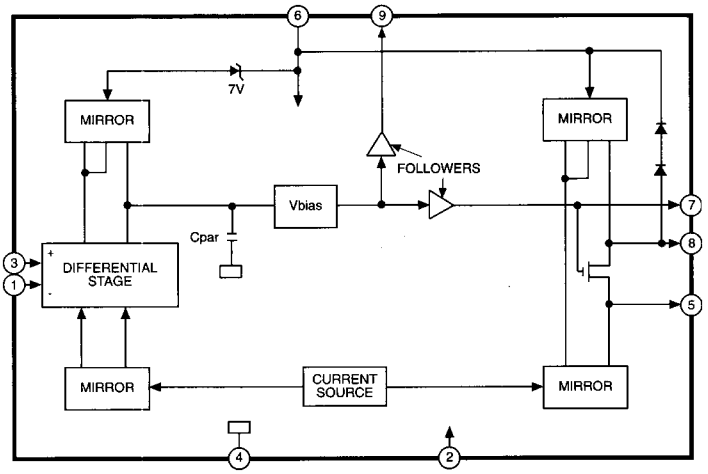
A Board IC303,1402 TDA4665T-T



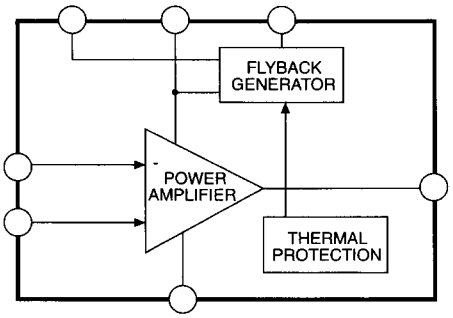
D Board IC261 TDA2822M



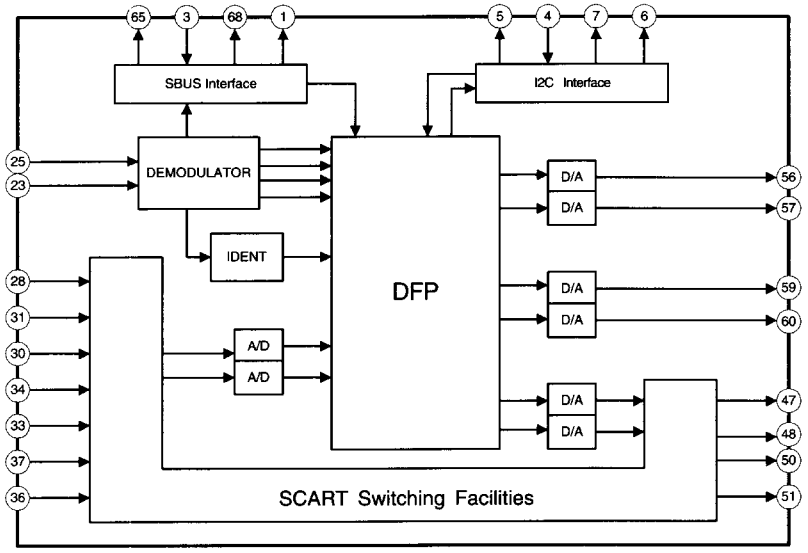
C Board IC703,704,705 TDA6111Q/N4



D Board IC802 TDA2822M



A Board IC201 MSP3400C-PS-C6-T/MSP3410B-PS-F7-T



SECTION 6

EXPLODED VIEWS

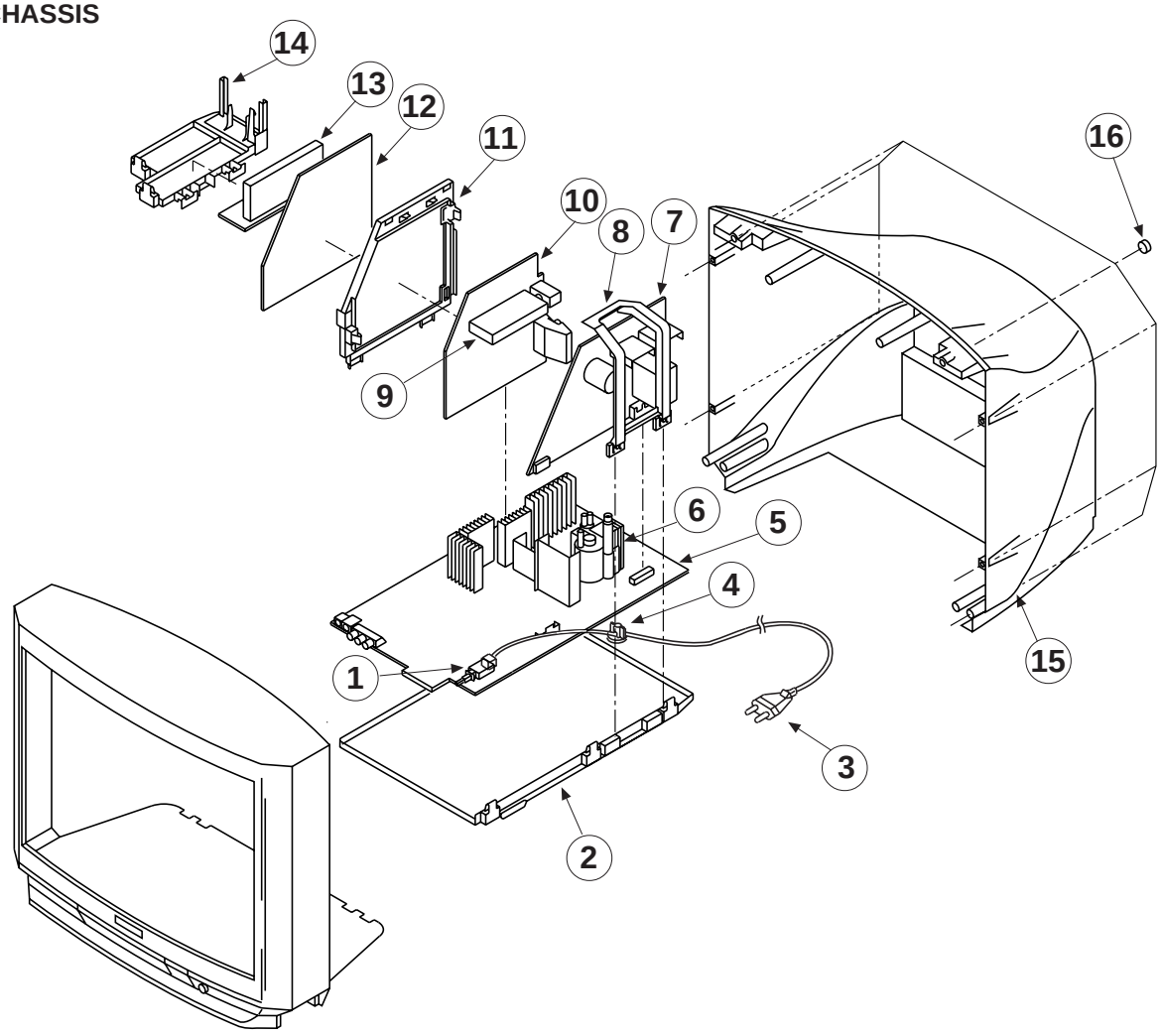
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " ***** " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

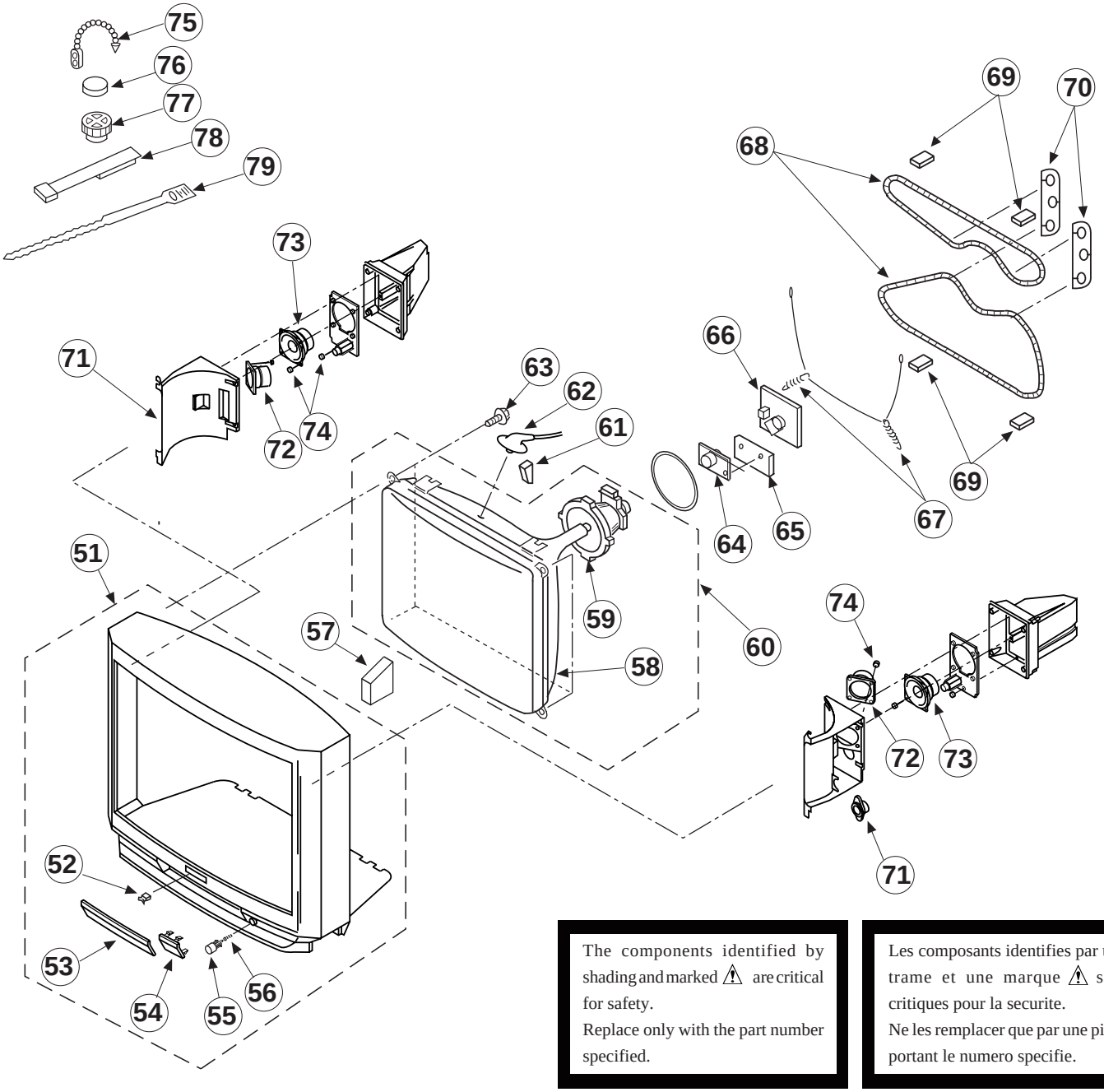
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS



REF NO		PART NO	DESCRIPTION	REMARK
1	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
2		*4-203-417-01	BRACKET, MAIN	
3	⚠	1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V KV-29K1A/29K1B/29K1D/ 29K1E/29K1K/29K1R	
	⚠	1-776-204-11	CORD, POWER (FILTER) KV-29K1U	
4		*4-202-531-01	AC CORD LOCK (SC)	
5		*A-1640-258-A	D BOARD, COMPLETE	
6	⚠	1-453-222-11	TRANSFORMER ASSY, FLYBACK (NX-4003/U2B4)	
7		*A-1636-024-A	G BOARD, COMPLETE	
8		*4-203-613-01	SUPPORTER, G	
9		1-693-338-21	TUNER (TUVIF) (AEP) (KV-29K1A/29K1D/29K1E/29K1K/29K1R)	
		1-693-340-21	TUNER (TUVIF) (FR) (KV-29K1B)	
		1-693-339-21	TUNER (TUVIF) (UK) (KV-29K1U)	
10		*A-1632-601-A	A BOARD, COMPLETE (KV-29K1A/29K1D)	
		*A-1632-604-A	A BOARD, COMPLETE (KV-29K1B)	
		*A-1632-602-A	A BOARD, COMPLETE (KV-29K1E)	
		*A-1632-605-A	A BOARD, COMPLETE (KV-29K1K)	
		*A-1632-606-A	A BOARD, COMPLETE (KV-29K1R)	
		*A-1632-603-A	A BOARD, COMPLETE (KV-29K1U)	
11		*4-203-612-01	BRACKET, A-B	
12		*A-1620-093-A	B BOARD, COMPLETE	
13		*A-1652-042-A	T BOARD, COMPLETE (KV-29K1A/29K1D/ 29K1E/29K1K/29K1R	
		*A-1652-044-A	T BOARD, COMPLETE (KV-29K1B)	
		*A-1652-047-A	T BOARD, COMPLETE (KV-29K1U)	
14		4-203-537-01	BRACKET, J-K-T	
15		4-202-993-11	COVER, REAR	
16		4-039-358-01	SCREW (4X16), (+) BV TAPPING	

6-2. PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO		PART NO	DESCRIPTION	REMARK
51		X-4200-305-1	BEZNET ASSY	52-56
52		4-047-464-01	CATCHER PUSH	
53		4-203-693-11	DOOR, CONTROL	
54		4-203-692-01	WINDOW, ORNAMENTAL	
55		4-203-704-01	BUTTON, POWER	
56		4-202-964-01	SPRING	
57		4-203-098-01	SUPPORTER, CRT	
58	⚠	8-733-856-05	PICTURE TUBE (SD-269) (M68LCT60X)	
59	⚠	8-451-466-11	DEFLECTION YOKE (Y29GXC2B)	
60	⚠	8-733-856-75	ITC	
61		3-704-495-01	SPACER, DY	
62	⚠	1-251-317-31	CAP ASSY, HIGH-VOLTAGE	
63		4-203-043-01	SCREW (M), PT	
64	⚠	8-453-005-21	NECK ASSY PICTURE TUBE (NA297-M2)	
65		*A-1644-079-A	VM BOARD, COMPLETE	

REF NO		PART NO	DESCRIPTION	REMARK
66		*A-1638-105-A	C BOARD, COMPLETE	
67		4-369-318-31	SPRING, TENSION	
68	⚠	1-406-807-11	COIL DEGAUSSING	
69		4-203-390-01	CUSHION, DGC	
70		4-202-749-01	HOLDER, D.G.C. (29"/32")	
71		1-505-484-11	SPEAKER (2.6CM)	
72		1-505-673-11	SPEAKER MID RANGE (8CM)	
73		1-505-674-11	SPEAKER WOOFER (10CM)	
74		4-039-358-01	SCREW (4X16),(+) BV TAPPING	
75		4-308-870-00	CLIP, LEAD WIRE	
76		1-452-032-00	MAGNET, DISK; 10MM Ø	
77		1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
78		X-4387-214-1	PERMALLOY ASSY, CORRECTION	
79		3-701-007-00	BAND, BINDING	

SECTION 7

ELECTRICAL PARTS LIST

When indicating parts by reference number, please include the board name.

CAPACITORS COILS

MF : mF , PF : mmF MMH : mH , µH : mH

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

B

REF.NO.	PART NO.	DESCRIPTION		REMARK
	*A-1620-093-A	B BOARD, COMPLETE **********		
		< CAPACITOR >		
C407	1-126-969-11	ELECT 220MF	20%	50V
C408	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C409	1-162-638-11	CERAMIC CHIP 1MF		16V
C410	1-162-638-11	CERAMIC CHIP 1MF		16V
C411	1-162-638-11	CERAMIC CHIP 1MF		16V
C412	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C413	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C414	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C418	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C419	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C420	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C421	1-162-568-11	CERAMIC CHIP 0.33MF	10%	16V
C422	1-162-638-11	CERAMIC CHIP 1MF		16V
C427	1-126-963-11	ELECT 4.7MF	20%	50V
C428	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C429	1-163-225-91	CERAMIC CHIP 8PF	5%	50V
C430	1-163-225-91	CERAMIC CHIP 8PF	5%	50V
C431	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C432	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C433	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C434	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C435	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	50V
C438	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C439	1-126-964-11	ELECT 10MF	20%	50V
C440	1-126-964-11	ELECT 10MF	20%	50V
C441	1-163-037-11	CERAMIC CHIP 0.022MF	10%	50V
C442	1-162-587-11	CERAMIC CHIP 0.039MF	10%	25V
C443	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C444	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C445	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C446	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C449	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C450	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C451	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C452	1-163-103-00	CERAMIC CHIP 27PF	5%	50V
C453	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C454	1-162-568-11	CERAMIC CHIP 0.33MF	10%	16V
C455	1-126-964-11	ELECT 10MF	20%	50V
C457	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V

REF.NO.	PART NO.	DESCRIPTION		REMARK
C1800	1-126-963-11	ELECT 4.7MF	20%	50V
C1801	1-126-963-11	ELECT 4.7MF	20%	50V
C1802	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C1803	1-126-964-11	ELECT 10MF	20%	50V
C1804	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1805	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
C1806	1-110-501-11	CERAMIC CHIP 0.33MF	10%	16V
C1807	1-126-963-11	ELECT 4.7MF	20%	50V
C1808	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1809	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1810	1-162-638-11	CERAMIC CHIP 1MF		16V
C1811	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C1812	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C1813	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
C1814	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1815	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1816	1-126-963-11	ELECT 4.7MF	20%	50V
C1817	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1818	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1819	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1823	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1824	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1825	1-126-964-11	ELECT 10MF	20%	50V
C1826	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1827	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1828	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C1829	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1830	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1831	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1832	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1833	1-126-964-11	ELECT 10MF	20%	50V
C1834	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1835	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
C1836	1-110-501-11	CERAMIC CHIP 0.33MF	10%	16V
C1839	1-126-963-11	ELECT 4.7MF	20%	50V
C1840	1-162-638-11	CERAMIC CHIP 1MF		16V
C1841	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C1842	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C1843	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V
C1846	1-126-963-11	ELECT 4.7MF	20%	50V
C1847	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1848	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V

B

REF.NO.	PART NO.	DESCRIPTION		REMARK
C1849	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C1850	1-163-245-11	CERAMIC CHIP 56PF	5%	50V
C1852	1-164-695-11	CERAMIC CHIP 0.0022MF	5%	50V
C1853	1-163-121-00	CERAMIC CHIP 150PF	5%	50V
C1856	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C1857	1-163-590-91	CERAMIC CHIP 22PF	5%	50V
C1858	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C1859	1-164-005-11	CERAMIC CHIP 0.47MF		16V
C1860	1-126-961-11	ELECT 2.2MF	20%	50V
C1861	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1862	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1864	1-163-125-00	CERAMIC CHIP 220PF	5%	50V
C1866	1-126-964-11	ELECT 10MF	20%	50V
C1867	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1868	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1869	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1870	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1871	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1872	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1873	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1874	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1875	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1876	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1877	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1878	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1879	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1880	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1881	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1882	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1883	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1884	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1885	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1886	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1887	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1889	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1890	1-126-964-11	ELECT 10MF	20%	50V
C1891	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1892	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1893	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1894	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1898	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1899	1-163-097-00	CERAMIC CHIP 15PF	5%	50V
C1904	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	50V
C1910	1-126-964-11	ELECT 10MF	20%	50V
C1912	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1913	1-163-229-11	CERAMIC CHIP 12PF	5%	50V
C1916	1-216-043-91	METAL GLAZE 560	5%	1/10W
C1919	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1924	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1925	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1926	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1927	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1928	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1931	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1932	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V
C1933	1-136-479-11	FILM 0.001MF	1%	100V
C1935	1-163-097-91	CERAMIC 15PF	5%	50V
C1937	1-163-103-00	CERAMIC CHIP 27PF	5%	50V
C1947	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1948	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1952	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C1953	1-216-204-00	METAL GLAZE 1.8K	5%	1/8W
C1954	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C1955	1-216-204-00	METAL GLAZE 1.8K	5%	1/8W

< CONNECTOR >

CN412	*1-564-513-11	PLUG, CONNECTOR 10P
CN417	*1-564-596-11	PLUG, CONNECTOR 15P
CN419	*1-564-512-11	PLUG, CONNECTOR 9P
CN1810	*1-564-512-11	PLUG, CONNECTOR 9P
CN1811	*1-900-901-85	CONNECTOR ASSY, MICRO 8P
CN1815	*1-564-512-11	PLUG, CONNECTOR 9P

< DIODE >

D401	8-719-914-43	DIODE DAN202K
D402	8-719-914-43	DIODE DAN202K
D403	8-719-028-00	DIODE MA3033-L
D410	8-719-401-63	DIODE MA3062M-TX
D411	8-719-914-43	DIODE DAN202K
D412	8-719-914-43	DIODE DAN202K
D415	8-719-914-43	DIODE DAN202K

< FERRITE BEAD >

FB401	1-414-234-11	INDUCTOR, FERRITE BEAD
FB402	1-414-234-11	INDUCTOR, FERRITE BEAD
FB403	1-414-234-11	INDUCTOR, FERRITE BEAD
FB404	1-414-234-11	INDUCTOR, FERRITE BEAD
FB405	1-414-234-11	INDUCTOR, FERRITE BEAD
FB406	1-414-234-11	INDUCTOR, FERRITE BEAD
FB407	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1801	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1802	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1803	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1804	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1805	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1806	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1808	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1809	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1810	1-414-234-11	INDUCTOR, FERRITE BEAD
FB1811	1-216-295-91	CONDUCTOR, CHIP
FB1812	1-216-295-91	CONDUCTOR, CHIP
FB1813	1-216-295-91	CONDUCTOR, CHIP
FB1815	1-216-295-91	CONDUCTOR, CHIP

< ENCAPSULATED FILTER >

FL1801	1-233-767-11	FILTER
FL1803	1-415-940-11	DELAY LINE
FL1807	1-236-071-11	ENCAPSULATED COMPONENT
FL1808	1-236-071-11	ENCAPSULATED COMPONENT
FL1809	1-236-071-11	ENCAPSULATED COMPONENT

< IC >

IC402	8-759-275-36	IC TDA4780/V3
IC403	8-759-421-42	IC SDA9361
IC1801	8-759-257-59	IC TDA8755T-T
IC1803	8-759-439-27	IC TMS4C2972-28DTR
IC1804	8-759-439-64	IC HEF4053BT
IC1805	8-759-439-64	IC HEF4053BT
IC1806	8-759-439-64	IC HEF4053BT
IC1807	8-759-439-64	IC HEF4053BT
IC1808	8-759-439-62	IC SAA4990H/V2
IC1809	8-759-460-49	IC SDA9280B21

B

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1810	8-759-438-66	IC CXD8626Q	
IC1811	8-759-257-59	IC TDA8755T-T	
IC1812	8-759-444-24	IC 74HCT4046AD/S470	
IC1813	8-759-426-57	IC 74HCT4046AD	
IC1814	8-759-438-64	IC SAA4952WP/V1	
IC1815	8-759-444-24	IC 74HCT4046AD/S470	
IC1816	8-759-444-25	IC P83C654EBA/560	
IC1817	8-759-439-27	IC TMS4C2972-28DTR	
IC1819	8-759-991-41	IC LM78L05ACZ	
IC1823	8-759-991-41	IC LM78L05ACZ	
IC1824	8-759-991-41	IC LM78L05ACZ	
IC1825	8-759-234-77	IC TC4S66F	
IC1831	8-759-439-26	IC SN74LS221D	
		< COIL >	
L401	1-408-429-00	INDUCTOR 470UH	
L402	1-408-429-00	INDUCTOR 470UH	
L407	1-410-999-11	INDUCTOR CHIP 3.3UH	
L1801	1-410-435-21	INDUCTOR 220UH	
L1802	1-410-435-21	INDUCTOR 220UH	
L1803	1-408-403-00	INDUCTOR 3.3UH	
L1804	1-408-409-00	INDUCTOR 10UH	
L1805	1-410-999-11	INDUCTOR CHIP 3.3UH	
L1806	1-216-295-91	CONDUCTOR, CHIP	
L1810	1-410-426-11	INDUCTOR 39UH	
L1811	1-216-295-91	CONDUCTOR, CHIP	
L1812	1-408-403-00	INDUCTOR 3.3UH	
L1813	1-216-295-91	CONDUCTOR, CHIP	
L1814	1-408-403-00	INDUCTOR 3.3UH	
L1901	1-410-426-11	INDUCTOR 39UH	
L1902	1-410-426-11	INDUCTOR 39UH	
L1903	1-414-170-11	INDUCTOR CHIP 100UH	
		< TRANSISTOR >	
Q411	8-729-901-06	TRANSISTOR DTA144EK	
Q412	8-729-901-06	TRANSISTOR DTA144EK	
Q413	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q415	8-729-900-53	TRANSISTOR DTC114EK	
Q416	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1801	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1802	8-729-901-01	TRANSISTOR DTC144EK	
Q1804	8-729-901-01	TRANSISTOR DTC144EK	
Q1805	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1807	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1808	8-729-901-01	TRANSISTOR DTC144EK	
Q1809	8-729-901-01	TRANSISTOR DTC144EK	
Q1810	8-729-901-01	TRANSISTOR DTC144EK	
Q1812	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1813	8-729-900-53	TRANSISTOR DTC114EK	
		< RESISTOR >	
JR406	1-216-295-91	CONDUCTOR, CHIP	
JR407	1-216-295-91	CONDUCTOR, CHIP	
JR408	1-216-295-91	CONDUCTOR, CHIP	
JR409	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
JR417	1-216-295-91	CONDUCTOR, CHIP	
JR418	1-216-295-91	CONDUCTOR, CHIP	
JR420	1-216-295-91	CONDUCTOR, CHIP	
JR421	1-216-295-91	CONDUCTOR, CHIP	
JR422	1-216-295-91	CONDUCTOR, CHIP	
JR423	1-216-295-91	CONDUCTOR, CHIP	
JR424	1-216-295-91	CONDUCTOR, CHIP	
JR426	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
JR1801	1-216-295-91	CONDUCTOR, CHIP	
JR1802	1-216-295-91	CONDUCTOR, CHIP	
JR1803	1-216-295-91	CONDUCTOR, CHIP	
JR1804	1-216-295-91	CONDUCTOR, CHIP	
JR1805	1-216-295-91	CONDUCTOR, CHIP	
JR1806	1-216-295-91	CONDUCTOR, CHIP	
JR1807	1-216-295-91	CONDUCTOR, CHIP	
JR1808	1-216-295-91	CONDUCTOR, CHIP	
JR1809	1-216-295-91	CONDUCTOR, CHIP	
JR1810	1-216-295-91	CONDUCTOR, CHIP	
JR1811	1-216-295-91	CONDUCTOR, CHIP	
JR1812	1-216-295-91	CONDUCTOR, CHIP	
JR1840	1-216-295-91	CONDUCTOR, CHIP	
JR1841	1-216-295-91	CONDUCTOR, CHIP	
JR1843	1-216-295-91	CONDUCTOR, CHIP	
JR1875	1-216-295-91	CONDUCTOR, CHIP	
JR1878	1-216-295-91	CONDUCTOR, CHIP	
JR1879	1-216-295-91	CONDUCTOR, CHIP	
JR1880	1-216-295-91	CONDUCTOR, CHIP	
JR1881	1-216-295-91	CONDUCTOR, CHIP	
JR1882	1-216-295-91	CONDUCTOR, CHIP	
JR1883	1-216-295-91	CONDUCTOR, CHIP	
JR1890	1-216-295-91	CONDUCTOR, CHIP	
JR1893	1-216-295-91	CONDUCTOR, CHIP	
JR1894	1-216-295-91	CONDUCTOR, CHIP	
JR1901	1-216-295-91	CONDUCTOR, CHIP	
JR1904	1-216-029-00	METAL GLAZE 150 5% 1/10W	
JR1905	1-216-295-91	CONDUCTOR, CHIP	
JR1910	1-216-295-91	CONDUCTOR, CHIP	
R408	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R409	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R439	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R443	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R444	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R445	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R446	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R447	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R448	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R449	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R450	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R451	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R452	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R453	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R454	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R455	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R456	1-216-097-91	METAL GLAZE 100K 5% 1/10W	
R457	1-216-099-00	METAL GLAZE 120K 5% 1/10W	
R458	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R459	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R463	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R465	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R466	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R467	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R468	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R469	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R470	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R473	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R477	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R483	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W	
R484	1-216-049-91	METAL GLAZE 1K 5% 1/10W	

B

REF.NO.	PART NO.	DESCRIPTION	REMARK
R487	1-216-295-91	CONDUCTOR, CHIP	
R488	1-216-107-00	METAL GLAZE 270K 5%	1/10W
R491	1-216-107-91	METAL GLAZE 270K 5%	1/10W
R499	1-216-025-91	CARBON 100 5%	1/4W
R1801	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R1802	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1803	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1804	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1805	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1806	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R1807	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1808	1-216-025-91	METAL GLAZE 100 5%	1/10W
R1810	1-216-076-00	METAL GLAZE 13K 5%	1/10W
R1811	1-216-025-91	METAL GLAZE 100 5%	1/10W
R1812	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1813	1-216-045-00	METAL GLAZE 680 5%	1/10W
R1814	1-216-031-00	METAL GLAZE 180 5%	1/10W
R1815	1-216-037-00	METAL GLAZE 330 5%	1/10W
R1816	1-216-295-91	CONDUCTOR, CHIP	
R1817	1-216-037-00	METAL GLAZE 330 5%	1/10W
R1818	1-216-037-00	METAL GLAZE 330 5%	1/10W
R1819	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1820	1-216-029-00	METAL GLAZE 150 5%	1/10W
R1821	1-216-023-00	METAL GLAZE 82 5%	1/10W
R1822	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1823	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R1824	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1826	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1827	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1828	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R1829	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1830	1-216-025-91	METAL GLAZE 100 5%	1/10W
R1831	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R1832	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1833	1-216-295-91	CONDUCTOR, CHIP	
R1835	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1836	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1837	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1838	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R1839	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R1840	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1841	1-216-295-91	CONDUCTOR, CHIP	
R1842	1-216-115-00	METAL GLAZE 560K 5%	1/10W
R1843	1-216-037-00	METAL GLAZE 330 5%	1/10W
R1844	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R1845	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1846	1-216-077-00	METAL GLAZE 15K 5%	1/10W
R1848	1-216-025-91	METAL GLAZE 100 5%	1/10W
R1849	1-216-001-00	METAL GLAZE 10 5%	1/10W
R1850	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1851	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1852	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1853	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1854	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1855	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1856	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1857	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1858	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1859	1-216-017-91	METAL GLAZE 47 5%	1/10W
R1860	1-216-001-00	METAL GLAZE 10 5%	1/10W
R1861	1-216-295-91	CONDUCTOR, CHIP	
R1864	1-216-071-00	METAL GLAZE 8.2K 5%	1/10W
R1865	1-216-295-91	CONDUCTOR, CHIP	
R1866	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1867	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R1868	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R1869	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1870	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1871	8-216-069-91	METAL GLAZE 6.8K 5%	1/10W
R1878	1-216-295-91	CONDUCTOR, CHIP	
R1879	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1880	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R1881	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1882	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R1885	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R1886	1-216-295-91	CONDUCTOR, CHIP	
R1888	1-216-021-00	METAL GLAZE 68 5%	1/10W
R1890	1-216-295-91	CONDUCTOR, CHIP	
R1891	1-216-295-91	CONDUCTOR, CHIP	
R1892	1-216-295-91	CONDUCTOR, CHIP	
R1893	1-216-295-91	CONDUCTOR, CHIP	
R1894	1-216-047-91	METAL GLAZE 820 5%	1/10W
R1895	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W
R1896	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1897	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1898	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1899	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1900	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1901	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1902	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1903	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1904	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1905	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1906	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1907	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1908	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1909	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1910	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1911	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1912	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1914	1-216-059-00	METAL GLAZE 2.7K 5%	1/10W
R1915	1-216-661-11	METAL CHIP 2.7K 0.50%	1/10W
R1920	1-414-170-11	INDUCTOR CHIP 100UH	
R1921	1-216-295-91	CONDUCTOR, CHIP	
R1922	1-216-025-91	METAL GLAZE 100 5%	1/10W
R1927	1-216-295-91	CONDUCTOR, CHIP	
R1928	1-216-115-91	METAL GLAZE 560K 5%	1/10W
R1933	1-163-103-00	CERAMIC CHIP 27PF 5%	50V
R1934	1-216-115-00	METAL GLAZE 560K 5%	1/10W
R1940	1-216-025-91	METAL GLAZE 100 5%	1/10W
		< CRYSTAL >	
X401	1-767-343-21	VIBRATOR, CRYSTAL	
X1801	1-579-175-11	VIBRATOR, CERAMIC	

****

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1632-601-A	A BOARD,COMPLETE (KV-29K1A/29K1D) **********			
	*A-1632-604-A	A BOARD,COMPLETE (KV-29K1B) **********			
	*A-1632-602-A	A BOARD,COMPLETE (KV-29K1E) **********			
	*A-1632-605-A	A BOARD,COMPLETE (KV-29K1K) **********			
	*A-1632-606-A	A BOARD,COMPLETE (KV-29K1R) **********			
	*A-1632-603-A	A BOARD,COMPLETE (KV-29K1U) **********			
		< CAPACITOR >			
C101	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C102	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C103	1-163-251-11	CERAMIC CHIP	100PF	5% 50V (KV-29K1B)	
C105	1-126-965-11	ELECT	22MF	20% 50V	
C111	1-124-907-11	ELECT	10MF	20% 50V	
C112	1-164-346-11	CERAMIC CHIP	1MF	16V	
C114	1-164-346-11	CERAMIC CHIP	1MF	16V	
C116	1-104-664-11	ELECT	47MF	20% 16V	
C117	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C118	1-104-664-11	ELECT	47MF	20% 16V	
C119	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C120	1-124-907-11	ELECT	10MF	20% 50V	
C121	1-164-299-11	CERAMIC CHIP	0.22MF	10% 25V	
C122	1-164-346-11	CERAMIC CHIP	1MF	16V	
C126	1-104-664-11	ELECT	47MF	20% 16V	
C127	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C128	1-104-664-11	ELECT	47MF	20% 16V	
C129	1-163-017-00	CERAMIC CHIP	0.0047MF	10% 50V	
C130	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C131	1-164-346-11	CERAMIC CHIP	1MF	16V	
C132	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C133	1-164-346-11	CERAMIC CHIP	1MF	16V	
C134	1-124-907-11	ELECT	10MF	20% 50V	
C135	1-164-299-11	CERAMIC CHIP	0.22MF	10% 25V	
C136	1-124-907-11	ELECT	10MF	20% 50V	
C137	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C138	1-124-907-11	ELECT	10MF	20% 50V	
C139	1-164-346-11	CERAMIC CHIP	1MF	16V	
C140	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C141	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C143	1-163-113-00	CERAMIC CHIP	68PF	5% 50V (KV-29K1B)	
C144	1-163-237-11	CERAMIC CHIP	27PF	5% 50V (KV-29K1B)	
C145	1-163-249-11	CERAMIC CHIP	82PF	5% 50V (KV-29K1B)	
C146	1-164-346-11	CERAMIC CHIP	1MF	16V	
C150	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C151	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C152	1-124-907-11	ELECT	10MF	20% 50V	
C153	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C154	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C155	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C156	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C157	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C159	1-164-505-11	CERAMIC CHIP	2.2MF	16V	
C160	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C162	1-164-346-11	CERAMIC CHIP	1MF	16V	
C163	1-163-009-11	CERAMIC CHIP	0.001MF	10% 50V	
C164	1-164-232-11	CERAMIC CHIP	0.01MF	10% 50V	
C165	1-164-346-11	CERAMIC CHIP	1MF	16V	
C166	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C167	1-164-222-11	CERAMIC CHIP	0.22MF	25V	
C170	1-164-232-11	CERAMIC CHIP	0.01MF	10% 50V	
C171	1-164-232-11	CERAMIC CHIP	0.01MF	10% 50V	
C200	1-163-251-11	CERAMIC CHIP	100PF	5% 50V	
C201	1-163-243-11	CERAMIC CHIP	47PF	5% 50V	
C202	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C203	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C204	1-162-568-11	CERAMIC CHIP	0.33MF	10% 16V	
C205	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C206	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C207	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C208	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C209	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C210	1-110-501-11	CERAMIC CHIP	0.33MF	10% 16V	
C211	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C212	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C213	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C214	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C215	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C216	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C217	1-124-907-11	ELECT	10MF	20% 50V	
C218	1-124-907-11	ELECT	10MF	20% 50V	
C219	1-163-131-00	CERAMIC CHIP	390PF	5% 50V	
C220	1-163-131-00	CERAMIC CHIP	390PF	5% 50V	
C221	1-163-275-11	CERAMIC CHIP	0.001MF	5% 50V	
C222	1-163-275-11	CERAMIC CHIP	0.001MF	5% 50V	
C223	1-163-275-11	CERAMIC CHIP	0.001MF	5% 50V	
C224	1-163-275-11	CERAMIC CHIP	0.001MF	5% 50V	
C227	1-165-320-11	CERAMIC CHIP	0.47MF	10% 16V	
C228	1-165-320-11	CERAMIC CHIP	0.47MF	10% 16V	
C229	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C230	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C231	1-163-087-00	CERAMIC CHIP	4PF	0.25PF 50V	
C232	1-163-087-00	CERAMIC CHIP	4PF	0.25PF 50V	
C233	1-163-243-11	CERAMIC CHIP	47PF	5% 50V	
C234	1-163-243-11	CERAMIC CHIP	47PF	5% 50V	
C303	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C304	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C305	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C306	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C307	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C308	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C309	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C310	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C311	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C312	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C313	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C314	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C315	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C316	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C317	1-164-004-11	CERAMIC CHIP	0.1MF	10% 25V	
C318	1-164-182-11	CERAMIC CHIP	0.0033MF	10% 50V	
C319	1-164-182-11	CERAMIC CHIP	0.0033MF	10% 50V	
C320	1-165-320-11	CERAMIC CHIP	0.47MF	10% 16V	
C321	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C322	1-164-506-11	CERAMIC CHIP	4.7MF	16V	
C323	1-164-506-11	CERAMIC CHIP	4.7MF	16V	

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REF.NO.	PART NO.	DESCRIPTION		REMARK
C324	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C325	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C332	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C333	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C334	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C335	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C336	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C337	1-110-501-11	CERAMIC CHIP 0.33MF	10%	16V
C338	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C339	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C340	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C341	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C342	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C343	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C344	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C345	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C346	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C347	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C350	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C351	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C355	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C356	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C357	1-163-241-11	CERAMIC CHIP 39PF	5%	50V (KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
C1001	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1002	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1003	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1004	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1005	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1006	1-165-321-11	CERAMIC CHIP 0.68MF	10%	16V
C1007	1-164-157-11	CERAMIC CHIP 0.068MF	10%	25V
C1010	1-126-933-11	ELECT 100MF	20%	16V
C1020	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1021	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1022	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1035	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1036	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1037	1-163-243-91	CERAMIC CHIP 47PF	5%	50V
C1038	1-163-243-91	CERAMIC CHIP 47PF	5%	50V
C1039	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1040	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C1041	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C1042	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1043	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C1050	1-104-661-91	ELECT 330MF	20%	16V
C1060	1-163-001-11	CERAMIC CHIP 220PF	10%	50V
C1061	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C1301	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1302	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1303	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1304	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1305	1-163-222-11	CERAMIC CHIP 5PF	0.25PF	50V
C1306	1-163-243-11	CERAMIC CHIP 47PF	5%	50V
C1310	1-104-658-91	ELECT 100MF	20%	10V
C1311	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1312	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1313	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1314	1-163-275-11	CERAMIC CHIP 0.001MF	5%	50V
C1315	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1316	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1318	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1320	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1321	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1322	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1323	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1324	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1325	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1326	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1327	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1328	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1329	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1330	1-164-004-11	CERAMIC CHIP 0.1MF	10%	50V
C1331	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1332	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1333	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1334	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1335	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C1350	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
C1360	1-163-133-00	CERAMIC CHIP 470PF	5%	50V
C1361	1-104-663-11	ELECT 33MF	20%	16V
C1401	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1402	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C1403	1-163-231-11	CERAMIC CHIP 15PF	5%	50V
C1404	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V
C1405	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1406	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1407	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1409	1-165-320-11	CERAMIC CHIP 0.47MF	10%	16V
C1413	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1414	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1415	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1416	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1417	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1418	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1419	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1420	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1421	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C1422	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C1465	1-163-243-91	CERAMIC CHIP 47PF	5%	50V
C2001	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C2002	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C2004	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C2005	1-164-506-11	CERAMIC CHIP 4.7MF		16V
C2007	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C2020	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2021	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2023	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C2024	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C2025	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C2026	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C2028	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C2029	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2030	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C2031	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2033	1-163-251-11	CERAMIC CHIP 100PF	5%	50V
C2034	1-130-772-00	FILM 0.22MF	5%	63V

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REF.NO.	PART NO.	DESCRIPTION	REMARK
		< FILTER >	
CD1001	1-527-992-31	OSCILLATOR, CERAMIC	
CF200	1-409-327-00	TRAP, CERAMIC (6.5MHZ)	(KV-29K1A/29K1B/29K1D/29K1E/29K1K/29K1R)
		< CONNECTOR >	
CN101	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P	
CN115	*1-564-524-11	PLUG, CONNECTOR 9P	
CN117	*1-564-520-11	PLUG, CONNECTOR 5P	
CN201	1-766-296-11	CONNECTOR, DUAL SCART	
CN310	*1-900-901-84	CONNECTOR ASSY, MICRO 9P	
CN1411	*1-564-523-11	PLUG, CONNECTOR 8P	
CN2012	*1-564-525-11	PLUG, CONNECTOR 10P	
		< BOOSTER >	
CP101	1-251-372-11	BOOSTER, RF	
		< DIODE >	
D102	8-719-158-49	DIODE RD12SB2	
D103	8-719-158-49	DIODE RD12SB2	
D104	8-719-158-49	DIODE RD12SB2	
D105	8-719-158-49	DIODE RD12SB2	
D199	8-719-914-43	DIODE DAN202K	
D200	8-719-158-49	DIODE RD12SB2	
D201	8-719-158-49	DIODE RD12SB2	
D202	8-719-158-49	DIODE RD12SB2	
D203	8-719-158-49	DIODE RD12SB2	
D204	8-719-158-49	DIODE RD12SB2	
D205	8-719-158-49	DIODE RD12SB2	
D206	8-719-158-49	DIODE RD12SB2	
D207	8-719-158-49	DIODE RD12SB2	
D208	8-719-158-49	DIODE RD12SB2	
D209	8-719-158-49	DIODE RD12SB2	
D210	8-719-158-49	DIODE RD12SB2	
D211	8-719-158-49	DIODE RD12SB2	
D212	8-719-158-49	DIODE RD12SB2	
D213	8-719-158-49	DIODE RD12SB2	
D214	8-719-158-49	DIODE RD12SB2	
D215	8-719-158-49	DIODE RD12SB2	
D217	8-719-158-49	DIODE RD12SB2	
D218	8-719-158-49	DIODE RD12SB2	
D219	8-719-158-49	DIODE RD12SB2	
D220	8-719-158-49	DIODE RD12SB2	
D221	8-719-158-49	DIODE RD12SB2	
D223	8-719-158-49	DIODE RD12SB2	
D301	8-719-401-41	DIODE MA3051L-TX	
D305	8-719-988-61	DIODE ISS355-TE-17	
D1007	8-719-914-44	DIODE DAP202K	
D1008	8-719-914-43	DIODE DAN202K	
D1009	8-719-105-91	DIODE RD5.6M-B2	
D1010	8-719-105-91	DIODE RD5.6M-B2	
D1012	8-719-914-43	DIODE DAN202K	
D1401	8-719-401-41	DIODE MA3051L-TX	
D1403	8-719-988-61	DIODE ISS355-TE-17	
		< FERRITE BEAD >	
FB101	1-414-235-11	INDUCTOR, FERRITE BEAD	
FB102	1-414-235-11	INDUCTOR, FERRITE BEAD	
FB2001	1-414-234-11	INDUCTOR, FERRITE BEAD	
		< ENCAPSULATED FILTER >	
FL102	1-236-071-11	ENCAPSULATED COMPONENT	
FL103	1-236-088-91	INDUCTOR 1.1UH	
FL200	1-236-071-11	ENCAPSULATED COMPONENT	
FL201	1-233-764-21	FILTER	
FL202	1-236-071-11	ENCAPSULATED COMPONENT	
FL203	1-236-071-11	ENCAPSULATED COMPONENT	
FL302	1-236-071-11	ENCAPSULATED COMPONENT	
FL1001	1-236-071-11	ENCAPSULATED COMPONENT	
FL1002	1-236-071-11	ENCAPSULATED COMPONENT	
FL1301	1-236-071-11	ENCAPSULATED COMPONENT	
FL1302	1-236-071-11	ENCAPSULATED COMPONENT	
FL1303	1-236-071-11	ENCAPSULATED COMPONENT	
FL1304	1-233-766-21	FILTER	
FL1305	1-233-768-21	FILTER (SMD)	
FL1310	1-233-765-21	FILTER	
FL1402	1-236-071-11	ENCAPSULATED COMPONENT	
FL2001	1-236-071-11	ENCAPSULATED COMPONENT	
FL2003	1-236-071-11	ENCAPSULATED COMPONENT	
		< IC >	
IC101	8-752-068-45	IC CXA1855Q	
IC102	8-759-267-25	IC LM2940CT-9.0	
IC104	8-759-514-57	IC BA7046F	
IC201	8-759-376-56	IC MSP3400C-PS-C6-T	(KV-29K1A/29K1D/29K1K/29K1R)
	8-759-437-33	IC MSP3410C-PS-F7-T-ND	(KV-29K1B/29K1E/29K1U)
IC302	8-759-439-59	IC TDA9144/N2	
IC303	8-759-288-85	IC TDA4665T-T	
IC304	8-759-439-60	IC TDA9170T	
IC1001	8-759-442-44	IC SDA30C164-2-GEG	
IC1002	8-759-439-66	IC M27C4001-15C1-AE401	
	1-750-797-11	SOCKET, PLCC (IC1002)	
IC1003	8-759-378-21	IC ST24C16FB6	
IC1004	8-759-259-18	IC MB3793-42PNF	
IC1006	8-759-988-13	IC LM393PS	
IC1301	8-752-379-35	IC CXD2044Q-TL	
IC1302	8-759-711-62	IC NJM2240M	
IC1303	8-759-385-76	IC MC14052BDR2	
IC1401	8-759-439-58	IC TDA9143/N2	
IC1402	8-759-288-85	IC TDA4665T-T	
IC2001	8-759-452-22	IC SDA5273P-C134-GEG	
IC2004	8-759-426-56	IC MB814400C-70PJN-ER	
		< COIL >	
L101	1-412-751-11	INDUCTOR 18UH	(KV-29K1B)
L321	1-412-006-31	INDUCTOR CHIP 10UH	(KV-29K1A/29K1B/29K1D/29K1E/29K1K/29K1R)
		< TRANSISTOR >	
Q102	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q103	8-729-039-67	TRANSISTOR BSS83	(KV-29K1B)
Q104	8-729-920-74	TRANSISTOR 2SC2412K-T-146-R	(KV-29K1B)
Q105	8-729-027-59	TRANSISTOR DTC144EKA-T146	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
Q106	8-729-216-22	TRANSISTOR 2SA1037K-T-146-R	(KV-29K1B)
Q107	8-729-216-22	TRANSISTOR 2SA1162-G	
Q108	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q109	8-729-216-22	TRANSISTOR 2SA1162-G	
Q110	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q112	8-729-216-22	TRANSISTOR 2SA1162-G	
Q120	8-729-027-52	TRANSISTOR DTC124EKA-T146	
Q200	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q205	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-29K1A/29K1B/29K1D/29K1E/29K1K/29K1R)
Q301	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q302	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q315	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q316	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q317	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q321	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q322	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1001	8-729-901-81	TRANSISTOR 2SC2412K	(KV-29K1B)
Q1015	8-729-900-53	TRANSISTOR DTC114EK	
Q1301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1303	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1304	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1305	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1307	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1308	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1309	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1310	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1311	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1312	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1313	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1314	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1401	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1402	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1403	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q1404	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1411	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1412	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q2005	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q2006	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q2007	8-729-027-59	TRANSISTOR DTC144EKA-T146	

< RESISTOR >

JR201	1-216-295-91	CONDUCTOR, CHIP				
JR202	1-216-295-91	CONDUCTOR, CHIP				
JR1001	1-216-295-91	CONDUCTOR, CHIP				
JR1002	1-216-295-91	CONDUCTOR, CHIP				
JR1003	1-216-295-91	CONDUCTOR, CHIP				
JR1004	1-216-295-91	CONDUCTOR, CHIP				
JR1008	1-216-025-91	METAL GLAZE	100	5%	1/10W	
JR1009	1-216-025-91	METAL GLAZE	100	5%	1/10W	
JR1010	1-216-025-91	METAL GLAZE	100	5%	1/10W	
JR1011	1-216-025-91	METAL GLAZE	100	5%	1/10W	
JR1339	1-216-295-91	CONDUCTOR, CHIP				
JR1340	1-216-295-91	CONDUCTOR, CHIP				
R101	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R102	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R103	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R104	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R106	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R107	1-216-295-91	CONDUCTOR, CHIP				(KV-29K1A/29K1D/29K1E/29K1K/29K1R/29K1U)
R108	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R109	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R110	1-216-097-91	METAL GLAZE	100K	5%	1/10W	
R111	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R112	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R113	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R114	1-216-311-00	METAL GLAZE	6.8	5%	1/10W	
R115	1-216-311-00	METAL GLAZE	6.8	5%	1/10W	
R116	1-216-311-00	METAL GLAZE	6.8	5%	1/10W	
R117	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R118	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R119	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R120	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R121	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R122	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R123	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R124	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R126	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R127	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R128	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R129	1-216-643-11	METAL CHIP	470	0.50%	1/10W	(KV-29K1B)
R130	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R131	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R132	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R133	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R134	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R135	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R136	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R137	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R138	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R139	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R141	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R142	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R143	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R144	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R146	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R148	1-216-643-11	METAL CHIP	470	0.50%	1/10W	(KV-29K1B)
R149	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-29K1B)
R151	1-216-643-11	METAL CHIP	470	0.50%	1/10W	(KV-29K1B)
R152	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R153	1-216-311-00	METAL GLAZE	6.8	5%	1/10W	
R154	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R155	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R156	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	(KV-29K1B)
R157	1-216-025-91	METAL GLAZE	100	5%	1/10W	(KV-29K1B)
R159	1-216-304-11	METAL GLAZE	3.3	5%	1/10W	
R160	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R162	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R163	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R166	1-216-039-00	METAL GLAZE	390	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R167	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R168	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R169	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R170	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R171	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R172	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R173	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R174	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R175	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R176	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R177	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R178	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R179	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R180	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R181	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R182	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R183	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R184	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R185	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R186	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R187	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R188	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R189	1-218-755-11	METAL CHIP	130K	0.50%	1/10W	
R190	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R191	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R192	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R193	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R194	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R195	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R196	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R197	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R198	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R199	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R200	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R201	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R202	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R203	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R204	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R205	1-216-037-00	METAL GLAZE	330	5%	1/10W	(KV-29K1A/29K1B/29K1D/29K1E/29K1K/29K1R)
R207	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R208	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R213	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R214	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R215	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R272	1-216-295-91	CONDUCTOR, CHIP				(KV-29K1A/29K1B/29K1D/29K1E/29K1K/29K1R)
R311	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R312	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R313	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R314	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R315	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R317	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R321	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R322	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R323	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R330	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R331	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R332	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R333	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R334	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R335	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R336	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R337	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R338	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R340	1-216-017-91	METAL GLAZE	47	5%	1/10W	
R341	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R342	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R345	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R351	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R352	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R353	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R355	1-216-284-91	METAL GLAZE	3.9M	5%	1/10W	
R374	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R375	1-216-308-00	METAL GLAZE	4.7	5%	1/10W	
R1001	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1011	1-216-295-91	CONDUCTOR, CHIP				
R1012	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1030	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1033	1-216-295-91	CONDUCTOR, CHIP				
R1034	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1036	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1037	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1038	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1039	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1040	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1041	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1042	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1044	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1045	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1046	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1047	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R1050	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1051	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1052	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1053	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1056	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1057	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1060	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1061	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1062	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1063	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1070	1-216-295-91	CONDUCTOR, CHIP				
R1071	1-216-295-91	CONDUCTOR, CHIP				
R1075	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1076	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-29K1B)
R1077	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-29K1B)
R1078	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-29K1B)
R1079	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1301	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1302	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1303	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1304	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1305	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1306	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1307	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1308	1-216-017-91	METAL GLAZE	47	5%	1/10W	

A G

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R1309	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R1310	1-216-039-00	METAL GLAZE	390	5% 1/10W	
R1311	1-216-069-00	METAL GLAZE	6.8K	5% 1/10W	
R1319	1-216-043-91	METAL GLAZE	560	5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
	1-216-045-91	METAL GLAZE	680	5% 1/10W	(KV-29K1U)
R1320	1-216-067-00	METAL GLAZE	5.6K	5% 1/10W	
R1321	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R1325	1-216-009-00	METAL GLAZE	22	5% 1/10W	
R1330	1-216-061-00	METAL GLAZE	3.3K	5% 1/10W	
R1331	1-216-055-00	METAL GLAZE	1.8K	5% 1/10W	
R1332	1-216-061-00	METAL GLAZE	3.3K	5% 1/10W	
R1333	1-216-061-00	METAL GLAZE	3.3K	5% 1/10W	
R1334	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R1335	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R1336	1-216-653-11	METAL CHIP	1.2K	0.50% 1/10W	
R1337	1-216-666-11	METAL CHIP	4.3K	0.50% 1/10W	
R1338	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1339	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1340	1-216-037-00	METAL GLAZE	330	5% 1/10W	
R1341	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R1342	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R1344	1-216-037-00	METAL GLAZE	330	5% 1/10W	
R1346	1-216-065-00	METAL GLAZE	4.7K	5% 1/10W	
R1347	1-216-089-91	METAL GLAZE	47K	5% 1/10W	
R1348	1-216-073-00	METAL GLAZE	10K	5% 1/10W	
R1349	1-216-057-00	METAL GLAZE	2.2K	5% 1/10W	
R1350	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R1351	1-216-047-91	METAL GLAZE	820	5% 1/10W	
R1352	1-216-051-00	METAL GLAZE	1.2K	5% 1/10W	
R1353	1-216-047-91	METAL GLAZE	820	5% 1/10W	
R1354	1-216-051-00	METAL GLAZE	1.2K	5% 1/10W	
R1401	1-216-095-00	METAL GLAZE	82K	5% 1/10W	
R1402	1-216-077-00	METAL GLAZE	15K	5% 1/10W	
R1403	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R1404	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R1405	1-216-033-00	METAL GLAZE	220	5% 1/10W	
R1406	1-216-037-00	METAL GLAZE	330	5% 1/10W	
R1407	1-216-037-00	METAL GLAZE	330	5% 1/10W	
R1410	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1411	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1412	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1413	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1414	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1415	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1416	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1417	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1418	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R1426	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R1427	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R1428	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R1455	1-216-284-91	METAL GLAZE	27K	5% 1/10W	
R1461	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R1462	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R1463	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R2001	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R2002	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R2019	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R2020	1-216-041-00	METAL GLAZE	470	5% 1/10W	
R2021	1-216-073-00	METAL GLAZE	10K	5% 1/10W	
R2022	1-216-057-00	METAL GLAZE	2.2K	5% 1/10W	
R2023	1-216-063-91	METAL GLAZE	3.9K	5% 1/10W	
R2024	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R2025	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R2026	1-216-025-91	METAL GLAZE	100	5% 1/10W	
R2027	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R2028	1-216-009-00	METAL GLAZE	22	5% 1/10W	
R2031	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R2032	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R2033	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R2034	1-216-295-91	CONDUCTOR, CHIP			
R2035	1-216-017-91	METAL GLAZE	47	5% 1/10W	
R2037	1-216-049-91	METAL GLAZE	1K	5% 1/10W	
R2040	1-216-057-00	METAL GLAZE	2.2K	5% 1/10W	
R2041	1-216-025-91	METAL GLAZE	100	5% 1/10W	
		< TUNER >			
TU101	1-693-338-21	TUNER/VIF (AEP)			(KV-29K1A/29K1D/29K1E/ 29K1K/29K1R)
	1-693-340-21	TUNER/VIF (FR)			(KV-29K1B)
	1-693-339-21	TUNER/VIF (UK)			(KV-29K1U)
		< CRYSTAL >			
X200	1-760-628-11	VIBRATOR, CRYSTAL			
X301	1-567-505-11	OSCILLATOR, CRYSTAL			
X302	1-567-504-11	OSCILLATOR, CRYSTAL			
X1001	1-760-551-21	VIBRATOR, CERAMIC			
X1401	1-567-505-11	OSCILLATOR, CRYSTAL			
X1402	1-567-504-11	OSCILLATOR, CRYSTAL			
		**********			
	*A-1636-024-A	G BOARD,COMPLETE			
		**********			
	*4-203-609-01	HOLDER, G			
		< CAPACITOR >			
C602	1-165-127-11	CERAMIC	470PF	10% 500V	
C603	1-165-127-11	CERAMIC	470PF	10% 500V	
C604	1-136-171-00	FILM	0.33MF	5% 50V	
C605	1-137-399-11	FILM	0.1MF	5% 50V	
C606	1-136-171-00	FILM	0.33MF	5% 50V	
C607	1-137-399-11	FILM	0.1MF	5% 50V	
C608	1-164-625-11	CERAMIC	680PF	10% 500V	
C609	1-129-718-00	FILM	0.022MF	5% 630V	
C610	1-126-953-11	ELECT	2200MF	20% 35V	
C611	1-126-953-11	ELECT	2200MF	20% 35V	
C612	1-104-665-11	ELECT	100MF	20% 25V	
C613	1-128-548-11	ELECT	4700MF	20% 25V	
C614	1-128-548-11	ELECT	4700MF	20% 25V	
C615	1-110-626-11	ELECT	330MF	20% 160V	
C616	1-164-625-11	CERAMIC	680PF	10% 500V	
C617	1-136-559-11	MYLAR	0.0047MF	10% 400V	
C618	1-104-989-91	FILM	0.0022MF	5% 200V	
C621 ⚠	1-136-519-12	FILM	0.47MF	20% 300V	
C622 ⚠	1-136-518-12	FILM	0.33MF	20% 300V	
C624 ⚠	1-113-890-61	CERAMIC	0.0022MF	20% 250V	
C626 ⚠	1-113-890-61	CERAMIC	0.0022MF	20% 250V	
C627	1-126-952-11	ELECT	1000MF	20% 16V	
C628	1-104-665-11	ELECT	100MF	20% 25V	
C629	1-162-599-12	CERAMIC	0.0047MF	250V	
C630	1-162-599-12	CERAMIC	0.0047MF	250V	

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REF.NO.		PART NO.	DESCRIPTION			REMARK
C631	⚠	1-161-964-91	CERAMIC	0.0047MF		250V
C632		1-535-143-11	LEAD, JUMPER (10.0MM)			
C633		1-125-555-11	ELECT	330MF	20%	400V
C634		1-535-143-11	LEAD, JUMPER (0.10MM)			
C635		1-136-165-00	FILM	0.1MF	5%	50V
C636		1-136-165-00	FILM	0.1MF	5%	50V
C637		1-126-964-11	ELECT	10MF	20%	50V
C642		1-161-744-00	CERAMIC	0.01MF		400V
C648		1-101-001-00	CERAMIC	0.001MF		50V
C650		1-126-964-11	ELECT	10MF	20%	50V
C651		1-136-171-00	FILM	0.33MF	5%	50V
C662		1-126-943-11	ELECT	2200MF	20%	25V
C663		1-126-964-11	ELECT	10MF	20%	50V
C664		1-102-129-00	CERAMIC	0.01MF	10%	50V
C665		1-126-940-11	ELECT	330MF	20%	25V
			< CONNECTOR >			
CN0008	⚠	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			
CN0009	⚠	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
CN0701		1-573-299-21	CONNECTOR, BOARD TO BOARD 10P			
CN0702		1-695-300-11	CONNECTOR, BOARD TO BOARD 20P			
CN0703	⚠	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P			
			< DIODE >			
D601		8-719-510-53	DIODE D4SB60L			
D602		8-719-991-33	DIODE 1SS133T-77			
D603		8-719-109-89	DIODE RD5.6ESB2			
D604		1-535-303-00	LEAD, JUMPER (5.0MM)			
D605		8-719-047-31	DIODE RBA-402L			
D607		8-719-510-12	DIODE D10SC4M			
		4-382-854-11	SCREW (M3X10), P, SW (+) (D607)			
D608		8-719-510-12	DIODE D10SC4M			
		4-382-854-11	SCREW (M3X10), P, SW (+) (D608)			
D609		8-719-047-31	DIODE RBA-402L			
D610		8-719-312-39	DIODE R2K-V1			
D611		8-719-510-64	DIODE S2LA20F			
D614		8-719-911-19	DIODE 1SS119-25			
D615		8-719-911-19	DIODE 1SS119-25			
D616		8-719-911-19	DIODE 1SS119-25			
D617		8-719-911-19	DIODE 1SS119-25			
D618		8-719-911-19	DIODE 1SS119-25			
D619		8-719-911-19	DIODE 1SS119-25			
D620		8-719-911-19	DIODE 1SS119-25			
D621		8-719-911-19	DIODE 1SS119-25			
D622		8-719-510-64	DIODE S2LA20F			
D623		8-719-510-64	DIODE S2LA20F			
D625		8-719-911-19	DIODE 1SS119-25			
D626		8-719-911-19	DIODE 1SS119-25			
D627		8-719-911-19	DIODE 1SS119-25			
D628		8-719-911-19	DIODE 1SS119-25			
D629		8-719-991-33	DIODE 1SS133T-77			
D630		8-719-991-33	DIODE 1SS133T-77			
D634		8-719-510-64	DIODE S2LA20F			
D635		8-719-991-33	DIODE 1SS133T-77			
D636		8-719-511-40	DIODE S1VB40			
D637		8-719-991-33	DIODE 1SS133T-77			
D638		8-719-991-33	DIODE 1SS133T-77			
D642		8-719-024-88	DIODE DINL20-TR			
			< FERRITE BEAD >			
FB601		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH			
FB602		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH			
FB603		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH			
FB604		1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH			
			< IC >			
IC601		1-810-051-11	POWER MODULE DM-48			
IC602	⚠	8-749-010-64	PHOTO COUPLER PC123FY2			
IC605		8-759-510-52	IC L4941BV			
			< COIL >			
L604		1-535-303-00	LEAD, JUMPER (5.0MM)			
L605		1-412-523-11	INDUCTOR	6.8UH		
L606		1-412-523-11	INDUCTOR	6.8UH		
			< TRANSFORMER >			
LF602	⚠	1-429-860-11	TRANSFORMER, LINE FILTER			
			< IC LINK >			
PS601	⚠	1-801-550-21	PROTECTOR MODULE	2.5A/MP250		
PS602	⚠	1-801-550-21	PROTECTOR MODULE	2.5A/MP250		
PS604	⚠	1-801-550-21	PROTECTOR MODULE	2.5A/MP250		
PS605	⚠	1-801-549-21	PROTECTOR MODULE	4.0A/MP400		
			< TRANSISTOR >			
Q601		8-729-032-87	TRANSISTOR 2SC4834NP-F09			
		4-382-854-11	SCREW (M3X10), P, SW (+) (Q601)			
Q602		8-729-032-87	TRANSISTOR 2SC4834NP-F09			
		4-382-854-11	SCREW (M3X10), P, SW (+) (Q602)			
Q603		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q604		8-729-200-21	TRANSISTOR 2SC2500-B			
Q605		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q608		8-729-200-21	TRANSISTOR 2SC2500-B			
Q610		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q611		8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q612		8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q615		8-729-200-21	TRANSISTOR 2SC2500-B			
Q621		8-729-200-21	TRANSISTOR 2SC2500-B			
			< RESISTOR >			
R601		1-202-933-61	FUSIBLE	0.1	10%	1/2W F
R602		1-247-891-00	CARBON	330K	5%	1/4W
R603		1-247-891-00	CARBON	330K	5%	1/4W
R604		1-216-369-00	METAL OXIDE	1	5%	2W F
R605		1-247-891-00	CARBON	330K	5%	1/4W
R606		1-247-891-00	CARBON	330K	5%	1/4W
R607		1-216-369-00	METAL OXIDE	1	5%	2W F
R608		1-247-887-00	CARBON	220K	5%	1/4W
R609		1-249-429-11	CARBON	10K	5%	1/4W F
R610		1-249-419-11	CARBON	1.5K	5%	1/4W F
R611		1-249-377-11	CARBON	0.47	5%	1/4W F
R614		1-247-807-31	CARBON	100	5%	1/4W
R616	⚠	1-202-961-11	WIREWOUND	1.8	5%	10W
R618	⚠	1-202-961-11	WIREWOUND	1.8	5%	10W
R619	⚠	1-244-945-91	CARBON	1M	5%	1/2W
R620	⚠	1-218-265-11	METAL	8.2M	5%	1W
R621		1-249-417-11	CARBON	1K	5%	1/4W F
R622		1-249-421-11	CARBON	2.2K	5%	1/4W
R623		1-249-430-11	CARBON	12K	5%	1/4W
R624		1-249-425-11	CARBON	4.7K	5%	1/4W
R625		1-247-815-91	CARBON	220	5%	1/4W
R626		1-247-863-91	CARBON	22K	5%	1/4W
R627		1-247-815-91	CARBON	220	5%	1/4W

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R628	1-247-885-00	CARBON	180K	5%	1/4W	
R636	1-207-905-00	WIREWOUND	0.27	10%	2W	F
R637	1-249-389-11	CARBON	4.7	5%	1/4W	F
R639	1-247-791-91	CARBON	22	5%	1/4W	
R640	1-247-791-91	CARBON	22	5%	1/4W	
R641	1-247-791-91	CARBON	22	5%	1/4W	
R642	1-247-791-91	CARBON	22	5%	1/4W	
R651	1-215-880-00	METAL OXIDE	10	5%	2W	F
R652	1-247-891-00	CARBON	330K	5%	1/4W	
R653	1-247-891-00	CARBON	330K	5%	1/4W	
R654	1-247-891-00	CARBON	330K	5%	1/4W	
R655	1-247-891-00	CARBON	330K	5%	1/4W	
R656	1-249-439-11	CARBON	68K	5%	1/4W	
R657	1-249-429-11	CARBON	10K	5%	1/4W	
R658	1-249-421-11	CARBON	2.2K	5%	1/4W	
R659	1-249-425-11	CARBON	4.7K	5%	1/4W	
R660	1-249-429-11	CARBON	10K	5%	1/4W	
R661	1-249-421-11	CARBON	2.2K	5%	1/4W	
R662	1-249-421-11	CARBON	2.2K	5%	1/4W	
R663	1-249-429-11	CARBON	10K	5%	1/4W	
R664	1-249-429-11	CARBON	10K	5%	1/4W	
R667	1-249-377-11	CARBON	0.47	5%	1/4W	F
R670	1-249-421-11	CARBON	2.2K	5%	1/4W	
		< RELAY >				
RY601 ⚠	1-755-167-11	RELAY, AC POWER				
RY602 ⚠	1-755-167-11	RELAY, AC POWER				
		< TRANSFORMER >				
T601 ⚠	1-429-844-11	TRANSFORMER, CONVERTER (PIT)				
T602 ⚠	1-427-864-11	TRANSFORMER, CONVERTER (PRT)				
T603 ⚠	1-429-952-11	TRANSFORMER, POWER				
		< THERMISTOR >				
THP601 ⚠	1-809-827-11	THERMISTOR, POSITIVE				
		< VARISTOR >				
VDR601	1-810-977-21	VARISTOR ERZV10D621				
**********						
*A-1638-105-A	C BOARD, COMPLETE					
	**********					
		< CAPACITOR >				
C3701	1-162-114-00	CERAMIC	0.0047MF		2KV	
C3703	1-107-662-11	ELECT	22MF	20%	250V	
C3712	1-102-978-00	CERAMIC	220PF	5%	50V	
C3713	1-102-978-00	CERAMIC	220PF	5%	50V	
C3714	1-102-978-00	CERAMIC	220PF	5%	50V	
C3716	1-128-528-11	ELECT	470MF	20%	16V	
C3720	1-162-116-00	CERAMIC	680PF	10%	2KV	
		< CONNECTOR >				
CN3701	1-695-915-11	TAB (CONTACT)				
CN3703	*1-564-512-11	PLUG, CONNECTOR 9P				
CN3704	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P				
		< DIODE >				
D3701	8-719-991-33	DIODE 1SS133T-77				
D3702	8-719-991-33	DIODE 1SS133T-77				
D3703	8-719-991-33	DIODE 1SS133T-77				
D3704	8-719-991-33	DIODE 1SS133T-77				
D3705	8-719-991-33	DIODE 1SS133T-77				
D3706	8-719-991-33	DIODE 1SS133T-77				
D3707	8-719-991-33	DIODE 1SS133T-77				
D3708	8-719-991-33	DIODE 1SS133T-77				
D3709	8-719-991-33	DIODE 1SS133T-77				
D3710	8-719-908-03	DIODE GP08				
D3714	8-719-991-33	DIODE 1SS133T-77				
D3715	8-719-018-82	DIODE RGP02-20EL-6394				
D3716	8-719-991-33	DIODE 1SS133T-77				
D3717	8-719-991-33	DIODE 1SS133T-77				
D3718	8-719-991-33	DIODE 1SS133T-77				
D3719	8-719-991-33	DIODE 1SS133T-77				
		< SOCKET >				
J3701 ⚠	1-526-990-21	SOCKET, CRT				
		< COIL >				
L3701	1-408-607-31	INDUCTOR	22UH			
L3702	1-408-607-31	INDUCTOR	22UH			
L3703	1-408-409-00	INDUCTOR	10UH			
L3704	1-408-607-31	INDUCTOR	22UH			
L3705	1-408-409-00	INDUCTOR	10UH			
L3706	1-408-607-31	INDUCTOR	22UH			
L3707	1-408-409-00	INDUCTOR	10UH			
L3708	1-412-528-11	INDUCTOR	18UH			
L3709	1-408-409-00	INDUCTOR	10UH			
		< TRANSISTOR >				
Q3701	8-729-906-70	TRANSISTOR BF871-127				
Q3702	8-729-906-70	TRANSISTOR BF871-127				
Q3703	8-729-906-70	TRANSISTOR BF871-127				
Q3704	8-729-326-11	TRANSISTOR 2SC2611				
Q3705	8-729-326-11	TRANSISTOR 2SC2611				
Q3706	8-729-326-11	TRANSISTOR 2SC2611				
Q3707	8-729-200-17	TRANSISTOR BF421L-AMMO				
Q3708	8-729-200-17	TRANSISTOR BF421L-AMMO				
Q3709	8-729-200-17	TRANSISTOR BF421L-AMMO				
Q3710	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q3711	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q3712	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q3715	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q3716	8-729-906-70	TRANSISTOR BF871-127				
Q3717	8-729-906-70	TRANSISTOR BF871-127				
Q3718	8-729-906-70	TRANSISTOR BF871-127				
		< RESISTOR >				
R3701	1-202-884-11	SOLID	820K	20%	1/2W	
R3702	1-202-884-11	SOLID	820K	20%	1/2W	
R3703	1-202-549-00	SOLID	100	20%	1/2W	
R3705	1-216-349-00	METAL OXIDE	1	5%	1W	F
R3706	1-216-349-00	METAL OXIDE	1	5%	1W	F
R3707	1-249-416-11	CARBON	820	5%	1/4W	
R3708	1-249-416-11	CARBON	820	5%	1/4W	
R3709	1-249-416-11	CARBON	820	5%	1/4W	
R3710	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R3711	1-202-565-00	SOLID	470	20%	1/2W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R3712	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R3713	1-202-565-00	SOLID	470	20%	1/2W	
R3714	1-215-922-11	METAL OXIDE	6.8K	5%	3W	F
R3715	1-202-565-00	SOLID	470	20%	1/2W	
R3716	1-249-405-11	CARBON	100	5%	1/4W	F
R3717	1-249-405-11	CARBON	100	5%	1/4W	F
R3718	1-249-405-11	CARBON	100	5%	1/4W	F
R3720	1-249-417-11	CARBON	1K	5%	1/4W	F
R3721	1-247-885-00	CARBON	180K	5%	1/4W	
R3722	1-249-417-11	CARBON	1K	5%	1/4W	F
R3723	1-247-885-00	CARBON	180K	5%	1/4W	
R3724	1-249-417-11	CARBON	1K	5%	1/4W	F
R3725	1-249-419-11	CARBON	1.5K	5%	1/4W	
R3726	1-249-419-11	CARBON	1.5K	5%	1/4W	
R3727	1-249-419-11	CARBON	1.5K	5%	1/4W	
R3728	1-247-815-91	CARBON	220	5%	1/4W	
R3729	1-247-815-91	CARBON	220	5%	1/4W	
R3730	1-247-815-91	CARBON	220	5%	1/4W	
R3731	1-249-403-11	CARBON	68	5%	1/4W	
R3732	1-249-403-11	CARBON	68	5%	1/4W	
R3733	1-249-403-11	CARBON	68	5%	1/4W	
R3734	1-202-549-00	SOLID	100	20%	1/2W	
R3735	1-247-885-00	CARBON	180K	5%	1/4W	
R3738	1-249-401-11	CARBON	47	5%	1/4W	
R3739	1-249-401-11	CARBON	47	5%	1/4W	
R3740	1-249-401-11	CARBON	47	5%	1/4W	
R3741	1-249-435-11	CARBON	33K	5%	1/4W	
R3742	1-249-429-11	CARBON	10K	5%	1/4W	
R3743	1-249-430-11	CARBON	12K	5%	1/4W	
R3747	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R3748	1-247-885-00	CARBON	180K	5%	1/4W	
R3749	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R3750	1-249-432-11	CARBON	18K	5%	1/4W	
R3751	1-216-437-00	METAL OXIDE	5.6K	5%	1W	F
R3752	1-249-431-11	CARBON	15K	5%	1/4W	
R3758	1-247-807-31	CARBON	100	5%	1/4W	
R3759	1-247-807-31	CARBON	100	5%	1/4W	
R3760	1-247-807-31	CARBON	100	5%	1/4W	
R3761	1-249-418-11	CARBON	1.2K	5%	1/4W	
R3762	1-249-418-11	CARBON	1.2K	5%	1/4W	
R3763	1-249-418-11	CARBON	1.2K	5%	1/4W	

< VARIABLE RESISTOR >

RV3701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M
RV3702	1-241-714-11	RES, ADJ, METAL FILM 110M

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*A-1640-258-A D BOARD, COMPLETE
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< CAPACITOR >

C101	1-126-965-11	ELECT	22MF	20%	50V
C236	1-136-165-00	FILM	0.1MF	5%	50V
C237	1-136-165-00	FILM	0.1MF	5%	50V
C238	1-126-967-11	ELECT	47MF	20%	16V
C241	1-126-967-11	ELECT	47MF	20%	16V
C242	1-126-953-11	ELECT	2200MF	20%	35V
C243	1-136-165-00	FILM	0.1MF	5%	50V
C244	1-126-953-11	ELECT	2200MF	20%	35V
C245	1-136-165-00	FILM	0.1MF	5%	50V
C260	1-126-933-11	ELECT	100MF	20%	16V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C261	1-126-933-11	ELECT	100MF	20%	16V
C262	1-104-665-11	ELECT	100MF	20%	25V
C263	1-136-165-00	FILM	0.1MF	5%	50V
C264	1-124-119-00	ELECT	330MF	20%	16V
C265	1-136-165-00	FILM	0.1MF	5%	50V
C266	1-104-665-11	ELECT	100MF	20%	25V
C267	1-162-318-11	CERAMIC	0.001MF	10%	500V
C268	1-162-318-11	CERAMIC	0.001MF	10%	500V
C269	1-126-967-11	ELECT	47MF	20%	16V
C270	1-136-165-00	FILM	0.1MF	5%	50V
C271	1-126-965-11	ELECT	22MF	20%	50V
C272	1-136-165-00	FILM	0.1MF	5%	50V
C273	1-136-161-00	FILM	0.047MF	5%	50V
C274	1-126-961-11	ELECT	2.2MF	20%	50V
C275	1-126-961-11	ELECT	2.2MF	20%	50V
C276	1-126-967-11	ELECT	47MF	20%	16V
C277	1-126-934-11	ELECT	220MF	20%	16V
C278	1-107-714-11	ELECT	10MF	20%	16V
C280	1-136-169-00	FILM	0.22MF	5%	50V
C281	1-126-967-11	ELECT	47MF	20%	16V
C283	1-136-169-00	FILM	0.22MF	5%	50V
C286	1-126-968-11	ELECT	100MF	20%	50V
C620	1-126-964-11	ELECT	10MF	20%	50V
C639	1-126-964-11	ELECT	10MF	20%	50V
C652	1-136-171-00	FILM	0.33MF	5%	50V
C653	1-126-965-91	ELECT	22MF	20%	16V
C654	1-104-664-11	ELECT	47MF	20%	25V
C655	1-104-664-11	ELECT	47MF	20%	25V
C656	1-126-967-11	ELECT	47MF	20%	16V
C657	1-136-165-00	FILM	0.1MF	5%	50V
C658	1-136-165-00	FILM	0.1MF	5%	50V
C659	1-136-165-00	FILM	0.1MF	5%	50V
C660	1-136-164-00	FILM	0.082MF	5%	50V
C666	1-104-661-91	ELECT	330MF	20%	16V
C667	1-136-165-00	FILM	0.1MF	5%	50V
C668	1-136-165-00	FILM	0.1MF	5%	50V
C669	1-126-933-11	ELECT	100MF	20%	16V
C670	1-136-165-00	FILM	0.1MF	5%	50V
C671	1-136-165-00	FILM	0.1MF	5%	50V
C672	1-126-967-11	ELECT	47MF	20%	16V
C801	1-123-024-21	ELECT	33MF		160V
C802	1-136-207-11	FILM	0.047MF	10%	250V
C805	1-102-212-00	CERAMIC	820PF	10%	500V
C808	1-162-116-00	CERAMIC	680PF	10%	2KV
C809	1-162-116-00	CERAMIC	680PF	10%	2KV
C810	1-136-558-11	FILM	0.0039MF	10%	400V
C811	1-111-229-11	FILM	0.018MF	3%	2KV
C812	1-129-720-00	FILM	0.033MF	5%	630V
C813	1-109-844-11	FILM	0.68MF	5%	400V
C814	1-129-702-00	FILM	0.001MF	10%	400V
C816	1-109-961-11	FILM	0.75MF	5%	400V
C817	1-136-759-11	FILM	0.039MF	5%	630V
C819	1-137-104-11	FILM	0.33MF	10%	250V
C822	1-126-967-11	ELECT	47MF	20%	50V
C823	1-102-129-00	CERAMIC	0.01MF	10%	50V
C824	1-102-228-00	CERAMIC	470PF	10%	500V
C825	1-126-964-11	ELECT	10MF	20%	50V
C827	1-102-228-00	CERAMIC	470PF	10%	500V
C828	1-102-030-00	CERAMIC	330PF	10%	500V
C835	1-107-655-11	ELECT	47MF	20%	250V
C836	1-102-228-00	CERAMIC	470PF	10%	500V

D

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Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
C837	1-102-228-00	CERAMIC 470PF 10% 500V	
C838	1-102-228-00	CERAMIC 470PF 10% 500V	
C841	1-106-375-12	MYLAR 0.022MF 10% 250V	
C842	1-106-357-00	MYLAR 0.0039MF 10% 400V	
C846	1-107-909-11	ELECT 47MF 20% 50V	
C851	1-129-702-00	FILM 0.001MF 10% 400V	
C852	1-126-968-11	ELECT 100MF 20% 50V	
C854	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C855	1-126-941-11	ELECT 470MF 20% 25V	
C856	1-102-129-00	CERAMIC 0.01MF 10% 50V	
C857	1-126-941-11	ELECT 470MF 20% 25V	
C860	1-106-220-00	MYLAR 0.1MF 10% 100V	
C861	1-137-423-11	MYLAR 0.15MF 10% 100V	
C862	1-130-789-00	FILM 1MF 5% 100V	
C866	1-137-040-11	FILM 0.0022MF 10% 400V	
C873	1-161-754-00	CERAMIC 0.001MF 10% 2KV	
C874	1-164-645-11	CERAMIC 1000PF 10% 500V	
C876	1-136-298-00	FILM 0.0033MF 2% 100V	
C891	1-108-680-11	MYLAR 0.001MF 10% 200V	
C894	1-102-978-00	CERAMIC 220PF 5% 50V	
C900	1-101-810-00	CERAMIC 100PF 5% 500V	
C901	1-101-810-00	CERAMIC 100PF 5% 500V	
C902	1-137-372-11	FILM 0.022MF 5% 50V	
C903	1-137-372-11	FILM 0.022MF 5% 50V	
C905	1-126-964-11	ELECT 10MF 20% 50V	
C907	1-126-960-11	ELECT 1MF 20% 50V	
C908	1-126-960-11	ELECT 1MF 20% 50V	
C1619	1-106-220-00	MYLAR 0.1MF 10% 100V	
C1620	1-535-303-00	LEAD, JUMPER (5.0MM)	
C1621	1-106-367-00	FILM 0.01MF 10% 400V	
C1628	1-136-244-11	FILM 0.1MF 5% 50V	
C1629	1-130-481-00	FILM 0.0068MF 5% 50V	
C1632	1-136-203-11	FILM 0.01MF 10% 250V	
C2701	1-126-964-11	ELECT 10MF 20% 50V	
C2702	1-104-664-11	ELECT 47MF 20% 25V	
C2706	1-102-820-00	CERAMIC 330PF 5% 50V	
		< CONNECTOR >	
CN0001	*1-564-520-11	PLUG, CONNECTOR 5P	
CN0002	*1-568-878-51	PIN, CONNECTOR 3P	
CN0004	1-568-878-51	PIN, CONNECTOR 3P	
CN0005	1-695-915-11	TAB (CONTACT)	
CN0101	*1-573-296-21	CONNECTOR, BOARD TO BOARD 10P	
CN0102	1-695-297-11	CONNECTOR, BOARD TO BOARD 20P	
CN0103	*1-564-509-11	PLUG, CONNECTOR 6P	
CN0521	*1-508-767-00	PIN, CONNECTOR (5MM PITCH) 5P	
CN0722 ⚠	*1-580-844-11	PIN, CONNECTOR (POWER)	
CN0723 ⚠	*1-695-292-11	PIN, CONNECTOR (POWER)	
CN0743	*1-564-596-11	PLUG, CONNECTOR 15P	
CN0745	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
CN0746	*1-568-879-11	PIN, CONNECTOR 4P	
CN3133	1-568-882-51	PIN, CONNECTOR 7P	
		< DIODE >	
D101	8-719-982-27	DIODE MTZJ-33C	
D236	8-719-911-19	DIODE 1SS119-25	
D237	8-719-911-19	DIODE 1SS119-25	
D238	8-719-911-19	DIODE 1SS119-25	
D239	8-719-911-19	DIODE 1SS119-25	
D262	8-719-911-19	DIODE 1SS119-25	
D264	8-719-911-19	DIODE 1SS119-25	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D276	8-719-911-19	DIODE 1SS119-25	
D278	8-719-911-19	DIODE 1SS119-25	
D279	8-719-911-19	DIODE 1SS119-25	
D280	8-719-911-19	DIODE 1SS119-25	
D281	8-719-911-19	DIODE 1SS119-25	
D282	8-719-911-19	DIODE 1SS119-25	
D613	8-719-911-19	DIODE 1SS119-25	
D631	8-719-911-19	DIODE 1SS119-25	
D632	8-719-911-19	DIODE 1SS119-25	
D633	1-247-807-31	CARBON 100 5% 1/4W	
D640	8-719-911-19	DIODE 1SS119-25	
D641	8-719-911-19	DIODE 1SS119-25	
D802	8-719-979-99	DIODE ERD08M-15	
D803	8-719-043-14	DIODE ESAD39M-06C	
	4-382-854-11	SCREW (M3X10), P, SW (+) (D803)	
D804	8-719-971-20	DIODE ERC38-06	
D805	8-719-908-03	DIODE GP08	
D806	8-719-908-03	DIODE GP08	
D810	8-719-979-85	DIODE EGP20G	
D811	8-719-302-43	DIODE EL1Z	
D812	8-719-510-64	DIODE S2LA20F	
D813	8-719-510-64	DIODE S2LA20F	
D814	8-719-908-03	DIODE GP08	
D815	8-719-110-13	DIODE HZS9.1NB2	
D816	8-719-110-41	DIODE RD15S-B2	
D817	8-719-911-19	DIODE 1SS119-25	
D818	8-719-911-19	DIODE 1SS119-25	
D819	8-719-911-19	DIODE 1SS119-25	
D873	8-719-911-19	DIODE 1SS119-25	
D874	8-719-911-19	DIODE 1SS119-25	
D875	8-719-048-52	DIODE MTZJ-T-77-20D	
D876	8-719-048-52	DIODE MTZJ-T-77-20D	
D901	8-719-030-11	DIODE SLA-570KT3F	
	*4-203-258-01	HOLDER, LED (D901)	
D1609	8-719-979-85	DIODE EGP20G	
D1611	8-719-911-19	DIODE 1SS119-25	
D2701	8-719-911-19	DIODE 1SS119-25	
D2702	8-719-911-19	DIODE 1SS119-25	
		< CONNECTOR >	
DY1	*1-580-798-11	CONNECTOR PIN (DY) 6P	
		< FUSE >	
F601 ⚠	1-532-505-41	FUSE	
	*1-533-725-11	HOLDER, FUSE; F601	
		< FERRITE BEAD >	
FB201	1-535-303-00	LEAD, JUMPER (5.0MM)	
FB202	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB203	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB801	1-422-613-11	COIL, AIR CORE	
FB802	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
		< IC >	
IC236	8-759-190-89	IC TDA7265	
	4-202-373-01	SPRING, IC	
	4-202-710-01	SPACER, INSULATING	
IC260	8-759-330-93	IC TDA7309	
IC261	8-759-502-21	IC TDA2822M	
IC603	8-759-095-34	IC LM2940T-8.0	
	4-382-854-11	SCREW (M3X10), P, SW (+)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC604	8-759-513-71	IC PQ05RF21	
	4-202-373-01	SPRING, IC	
IC606	8-759-991-43	IC LM78L12ACZ	
IC607	8-759-513-71	IC PQ05RF21	
	4-202-373-01	SPRING, IC	
IC801	8-759-103-93	IC UPC393C	
IC802	8-759-192-71	IC STV9379	
	4-201-023-01	SPACER, INSULATING	
	4-202-373-01	SPRING, IC	
IC900	8-742-014-00	RECEIVER HIC SBX1981-51	
IC2701	8-759-603-37	IC M5216P	
		< JACK >	
J900	1-764-606-11	JACK	
J901	1-568-678-11	TERMINAL BLOCK, S 3P	
J1200	1-770-218-11	JACK, PIN	
		< COIL >	
L601	1-535-303-00	LEAD, JUMPER (5.0MM)	
L602	1-412-525-31	INDUCTOR 10UH	
L603	1-412-525-31	INDUCTOR 10UH	
L801	1-459-123-00	COIL,DUST CORE(PAC)	
L802	1-459-123-00	COIL,DUST CORE(PAC)	
L803	1-459-123-00	COIL,DUST CORE(PAC)	
L806	1-459-592-11	COIL (WITH CORE) (PMC)	
L807	1-412-524-11	INDUCTOR 8.2UH	
L808	1-535-303-00	LEAD, JUMPER (5.0MM)	
L809	1-412-533-21	INDUCTOR 47UH	
L810	1-412-524-11	INDUCTOR 8.2UH	
L811	1-459-104-00	COIL, WITH CORE	
L813	1-459-104-00	COIL, WITH CORE	
L814	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
L815	1-412-523-11	INDUCTOR 6.8UH	
L816	1-408-947-00	INDUCTOR 2.2MMH	
L817	1-535-303-00	LEAD, JUMPER (5.0MM)	
L818	1-535-303-00	LEAD, JUMPER (5.0MM)	
L900	1-408-409-00	INDUCTOR 10UH	
L901	1-408-409-00	INDUCTOR 10UH	
L902	1-249-417-11	CARBON 1K 5% 1/4W	
L903	1-249-417-11	CARBON 1K 5% 1/4W	
L1604	1-459-104-00	COIL, WITH CORE	
L1605	1-406-988-21	COIL, CHOKE 6.8MMH	
		< TRANSISTOR >	
Q276	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q277	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q278	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q279	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q280	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q281	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q282	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q606	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q607	8-729-029-56	TRANSISTOR DTA144ESA	
Q613	8-729-030-03	TRANSISTOR DTC144ESA-TP	
Q614	8-729-029-56	TRANSISTOR DTA144ESA	
Q616	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q617	8-729-029-67	TRANSISTOR DTC114ESA-TP	
Q618	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q620	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q624	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-119-80	TRANSISTOR 2SC2688-LK	
Q802	8-729-821-07	TRANSISTOR 2SC3997CA	
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q802)	
	4-200-399-01	SPACER, IC (Q802)	
Q803	8-729-039-68	TRANSISTOR IRF620	
	4-202-373-01	SPRING, IC (Q803)	
Q804	8-729-039-68	TRANSISTOR IRF620	
Q1610	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1611	8-729-017-06	TRANSISTOR 2SC4793	
Q2701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		< RESISTOR >	
R236	1-249-424-11	CARBON 3.9K 5% 1/4W	
R237	1-249-417-11	CARBON 1K 5% 1/4W	
R239	1-249-424-11	CARBON 3.9K 5% 1/4W	
R240	1-247-863-91	CARBON 1K 5% 1/4W	
R244	1-249-413-11	CARBON 470 5% 1/4W	
R245	1-249-430-11	CARBON 12K 5% 1/4W	
R246	1-249-430-11	CARBON 12K 5% 1/4W	
R247	1-249-413-11	CARBON 470 5% 1/4W	
R248	1-249-425-11	CARBON 4.7K 5% 1/4W	
R249	1-216-357-00	METAL OXIDE 4.7 5% 1W	F
R250	1-216-357-00	METAL OXIDE 4.7 5% 1W	F
R251	1-249-429-11	CARBON 10K 5% 1/4W	
R252	1-249-429-11	CARBON 10K 5% 1/4W	
R255	1-249-411-11	CARBON 330 5% 1/4W	
R256	1-249-411-11	CARBON 330 5% 1/4W	
R260	1-247-863-91	CARBON 22K 5% 1/4W	
R261	1-247-863-91	CARBON 22K 5% 1/4W	
R262	1-249-421-11	CARBON 2.2K 5% 1/4W	
R263	1-249-421-11	CARBON 2.2K 5% 1/4W	
R264	1-212-857-00	FUSIBLE 10 5% 1/4W	F
R265	1-249-389-11	CARBON 4.7 5% 1/4W	F
R266	1-249-389-11	CARBON 4.7 5% 1/4W	F
R267	1-247-815-91	CARBON 220 5% 1/4W	
R268	1-247-815-91	CARBON 220 5% 1/4W	
R269	1-249-415-11	CARBON 680 5% 1/4W	
R270	1-249-415-11	CARBON 680 5% 1/4W	
R271	1-247-742-11	CARBON 180 5% 1/2W	F
R276	1-535-303-00	LEAD, JUMPER (5.0MM)	
R277	1-249-419-11	CARBON 1.5K 5% 1/4W	
R278	1-249-441-11	CARBON 100K 5% 1/4W	
R279	1-249-429-11	CARBON 10K 5% 1/4W	
R280	1-249-425-11	CARBON 4.7K 5% 1/4W	
R281	1-249-437-11	CARBON 47K 5% 1/4W	
R282	1-249-430-11	CARBON 12K 5% 1/4W	
R283	1-249-429-11	CARBON 10K 5% 1/4W	
R284	1-249-432-11	CARBON 18K 5% 1/4W	
R285	1-249-425-11	CARBON 4.7K 5% 1/4W	
R286	1-249-421-11	CARBON 2.2K 5% 1/4W	
R287	1-249-412-11	CARBON 390 5% 1/4W	
R288	1-249-421-11	CARBON 2.2K 5% 1/4W	
R289	1-249-421-11	CARBON 2.2K 5% 1/4W	
R290	1-247-807-31	CARBON 100 5% 1/4W	
R291	1-249-421-11	CARBON 2.2K 5% 1/4W	
R292	1-249-429-11	CARBON 10K 5% 1/4W	
R293	1-249-429-11	CARBON 10K 5% 1/4W	
R294	1-249-429-11	CARBON 10K 5% 1/4W	
R295	1-247-885-00	CARBON 180K 5% 1/4W	
R296	1-247-885-00	CARBON 180K 5% 1/4W	
R297	1-247-807-31	CARBON 100 5% 1/4W	

D

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R298	1-247-807-31	CARBON	100	5%	1/4W	
R630	1-249-419-11	CARBON	1.5K	5%	1/4W	
R631	1-215-477-00	METAL	220K	1%	1/4W	
R632	1-249-416-11	CARBON	820	5%	1/4W	
R633	1-249-429-11	CARBON	10K	5%	1/4W	
R634	1-247-895-91	CARBON	470K	5%	1/4W	
R635	1-215-926-00	METAL OXIDE	33K	5%	3W	F
R638	1-249-425-11	CARBON	4.7K	5%	1/4W	
R644	1-249-425-11	CARBON	4.7K	5%	1/4W	
R645	1-249-410-11	CARBON	270	5%	1/4W	
R646	1-247-843-11	CARBON	3.3K	5%	1/4W	
R647	1-249-420-11	CARBON	1.8K	5%	1/4W	
R648	1-535-303-00	LEAD, JUMPER (5.0MM)				
R649	1-535-303-00	LEAD, JUMPER (5.0MM)				
R665	1-249-425-11	CARBON	4.7K	5%	1/4W	
R666	1-249-413-11	CARBON	470	5%	1/4W	
R668	1-249-430-11	CARBON	12K	5%	1/4W	
R675	1-535-303-00	LEAD, JUMPER (5.0MM)				
R676	1-249-437-11	CARBON	47K	5%	1/4W	
R677	1-249-437-11	CARBON	47K	5%	1/4W	
R678	1-249-425-11	CARBON	4.7K	5%	1/4W	
R681	1-249-414-11	CARBON	560	5%	1/4W	
R802	1-215-916-00	METAL OXIDE	680	5%	3W	F
R803	1-215-916-00	METAL OXIDE	680	5%	3W	F
R804	1-215-916-00	METAL OXIDE	680	5%	3W	F
R805	1-216-487-11	METAL OXIDE	12K	5%	3W	F
R806	1-249-411-11	CARBON	330	5%	1/4W	
R807	1-247-843-11	CARBON	3.3K	5%	1/4W	
R808	1-216-384-11	METAL OXIDE	0.39	5%	3W	F
R809	1-215-880-00	METAL OXIDE	10	5%	2W	F
R810	1-215-914-11	METAL OXIDE	330	5%	3W	F
R811	1-216-434-11	METAL OXIDE	1.8K	5%	1W	F
R817	1-202-972-61	FUSIBLE	1	5%	1/4W	F
R818	1-249-377-11	CARBON	0.47	5%	1/4W	F
R819	1-249-377-11	CARBON	0.47	5%	1/4W	F
R820	1-214-907-00	METAL	56K	1%	1/2W	
R821	1-535-303-00	LEAD, JUMPER (5.0MM)				
R823	1-249-420-11	CARBON	1.8K	5%	1/4W	
R835	1-249-434-11	CARBON	27K	5%	1/4W	
R837	1-249-422-11	CARBON	2.7K	5%	1/4W	
R842	1-249-399-11	CARBON	33	5%	1/4W	F
R843	1-202-822-00	SOLID	2.2K	20%	1/2W	
R844	1-249-424-11	CARBON	3.9K	5%	1/4W	
R845	1-247-881-00	CARBON	120K	5%	1/4W	
R846	1-249-422-11	CARBON	2.7K	5%	1/4W	
R847	1-249-437-11	CARBON	47K	5%	1/4W	
R848	1-249-425-11	CARBON	4.7K	5%	1/4W	
R849	1-249-429-11	CARBON	10K	5%	1/4W	
R850	1-249-389-11	CARBON	4.7	5%	1/4W	F
R851	1-216-394-00	METAL OXIDE	2.7	5%	3W	F
R852	1-247-885-00	CARBON	180K	5%	1/4W	
R853	1-249-437-11	CARBON	47K	5%	1/4W	
R854	1-249-436-11	CARBON	39K	5%	1/4W	
R855	1-249-417-11	CARBON	1K	5%	1/4W	
R857	1-202-822-00	SOLID	2.2K	20%	1/2W	
R859	1-249-432-11	CARBON	18K	5%	1/4W	
R860	1-247-843-11	CARBON	3.3K	5%	1/4W	
R861	1-249-417-11	CARBON	1K	5%	1/4W	
R862	1-249-383-11	CARBON	1.5	5%	1/4W	F
R863	1-216-475-11	METAL OXIDE	120	5%	3W	F
R864	1-535-303-00	LEAD, JUMPER (5.0MM)				
R865	1-249-436-11	CARBON	39K	5%	1/4W	
R866	1-249-432-11	CARBON	18K	5%	1/4W	
R867	1-216-389-11	METAL OXIDE	1	5%	3W	F
R868	1-249-418-11	CARBON	1.2K	5%	1/4W	
R875	1-535-303-00	LEAD, JUMPER (5.0MM)				
R891	1-535-303-00	LEAD, JUMPER (5.0MM)				
R892	1-535-303-00	LEAD, JUMPER (5.0MM)				
R895	1-215-866-11	METAL OXIDE	330	5%	1W	F
R900	1-247-815-91	CARBON	220	5%	1/4W	
R908	1-249-401-11	CARBON	47	5%	1/4W	
R909	1-249-437-11	CARBON	47K	5%	1/4W	
R910	1-249-437-11	CARBON	47K	5%	1/4W	
R911	1-249-425-11	CARBON	4.7K	5%	1/4W	
R912	1-249-421-11	CARBON	2.2K	5%	1/4W	
R913	1-249-425-11	CARBON	4.7K	5%	1/4W	
R914	1-249-421-11	CARBON	2.2K	5%	1/4W	
R922	1-249-406-11	CARBON	120	5%	1/4W	
R923	1-249-406-11	CARBON	120	5%	1/4W	
R925	1-249-429-11	CARBON	10K	5%	1/4W	
R926	1-249-429-11	CARBON	10K	5%	1/4W	
R1641	1-247-863-91	CARBON	22K	5%	1/4W	
R1645	1-249-439-11	CARBON	68K	5%	1/4W	
R1646	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1647	1-535-303-00	LEAD, JUMPER (5.0MM)				
R1648	1-215-875-11	METAL OXIDE	10K	5%	1W	F
R1649	1-249-429-11	CARBON	10K	5%	1/4W	
R1650	1-249-429-11	CARBON	10K	5%	1/4W	
R1651	1-249-399-11	CARBON	33	5%	1/4W	
R1652	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1654	1-535-303-00	LEAD, JUMPER (5.0MM)				
R1655	1-535-303-00	LEAD, JUMPER (5.0MM)				
R2701	1-247-863-91	CARBON	22K	5%	1/4W	
R2702	1-247-863-91	CARBON	22K	5%	1/4W	
R2703	1-247-863-91	CARBON	22K	5%	1/4W	
R2704	1-247-863-91	CARBON	22K	5%	1/4W	
R2705	1-249-429-11	CARBON	10K	5%	1/4W	
R2706	1-249-429-11	CARBON	10K	5%	1/4W	
R2707	1-535-303-00	LEAD, JUMPER (5.0MM)				
R2708	1-249-429-11	CARBON	10K	5%	1/4W	
R2713	1-535-303-00	LEAD, JUMPER (5.0MM)				
R2719	1-212-857-00	FUSIBLE	10	5%	1/4W	F

< SWITCH >

S601	⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
S900		1-692-979-11	SWITCH, TACTILE	
S901		1-692-979-11	SWITCH, TACTILE	
S902		1-692-979-11	SWITCH, TACTILE	

< TRANSFORMER >

T801		1-427-762-11	TRANSFORMER, FERRITE (HDT)	
T803		1-427-776-11	TRANSFORMER, FERRITE (PMT)	
T804		1-426-940-11	HLT	
T805	⚠	1-453-222-11	TRANSFORMER ASSY,FLYBACK(NX-4003/U2B4)	

< THERMISTOR >

TH801		1-800-193-00	THERMISTOR	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1644-079-A	VM BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C1701	1-104-661-91	ELECT	330MF	20%	16V	
C1702	1-163-241-11	CERAMIC CHIP	39PF	5%	50V	
C1704	1-161-830-00	CERAMIC	0.0047MF		500V	
C1706	1-107-638-11	ELECT	33MF	20%	160V	
C1707	1-126-964-11	ELECT	10MF	20%	50V	
C1708	1-163-075-00	CERAMIC CHIP	0.047MF		50V	
C1709	1-104-999-11	FILM	0.1MF	5%	200V	
C1710	1-136-203-11	FILM	0.01MF	10%	250V	
C1711	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C1712	1-107-667-11	ELECT	2.2MF	20%	160V	
C1713	1-162-318-11	CERAMIC	0.001MF	10%	500V	
C1714	1-136-203-11	FILM	0.01MF	10%	250V	
C1715	1-163-001-11	CERAMIC CHIP	220PF	10%	50V	
C1716	1-126-964-11	ELECT	10MF	20%	50V	
C1718	1-126-934-11	ELECT	220MF	20%	16V	
C1719	1-126-964-11	ELECT	10MF	20%	50V	
C1722	1-101-810-00	CERAMIC	100PF	5%	500V	
C1723	1-126-791-11	ELECT	10MF	20%	16V	
C1724	1-101-810-00	CERAMIC	100PF	5%	500V	
C1725	1-102-947-00	CERAMIC	10PF	0.5PF	50V	
		< CONNECTOR >				
CN1701	1-774-418-11	CONNECTOR, BOARD TO BOARD 8P				
CN1830	1-568-882-51	PIN, CONNECTOR 7P				
		< DIODE >				
D1701	8-719-914-43	DIODE DAN202K				
D1702	8-719-914-42	DIODE DA204K				
D1704	8-719-982-37	DIODE MTZJ-39C				
D1705	8-719-982-37	DIODE MTZJ-39C				
D1706	8-719-914-42	DIODE DA204K				
D1708	8-719-914-42	DIODE DA204K				
D1709	8-719-914-42	DIODE DA204K				
		< COIL >				
L1701	1-216-296-91	CONDUCTOR, CHIP				
L1702	1-408-404-00	INDUCTOR	3.9UH			
		< TRANSISTOR >				
Q1701	8-729-901-59	TRANSISTOR BF199				
Q1702	8-729-216-22	TRANSISTOR 2S1162-G				
Q1703	8-729-017-05	TRANSISTOR 2SA1837				
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q1703)				
Q1704	8-729-920-74	TRANSISTOR 2SC2412K-QR				
Q1705	8-729-017-06	TRANSISTOR 2SC4793				
	4-382-854-11	SCREW (M3X10), P, SW (+) (Q1705)				
Q1706	8-729-920-74	TRANSISTOR 2SC2412K-QR				
Q1707	8-729-920-74	TRANSISTOR 2SC2412K-QR				
Q1708	8-729-901-59	TRANSISTOR BF199				
Q1710	8-729-216-22	TRANSISTOR 2SA1162-G				
Q1711	8-729-039-27	TRANSISTOR BC546B				
Q1712	8-729-039-25	TRANSISTOR BC556B				
		< RESISTOR >				
JR1701	1-216-296-91	CONDUCTOR, CHIP				
JR1702	1-216-296-91	CONDUCTOR, CHIP				
R1701	1-216-025-91	METAL GLAZE	100	5%	1/10W	
R1702	1-249-413-11	CARBON	470	5%	1/4W	
R1703	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R1704	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1705	1-247-736-11	CARBON	56	5%	1/2W	F
R1706	1-249-414-11	CARBON	560	5%	1/4W	F
R1707	1-249-411-11	CARBON	330	5%	1/4W	
R1709	1-249-412-11	CARBON	390	5%	1/4W	
R1710	1-216-295-91	CONDUCTOR, CHIP				
R1711	1-249-432-11	CARBON	18K	5%	1/4W	
R1712	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1713	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R1714	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1715	1-215-866-11	METAL OXIDE	330	5%	1W	F
R1716	1-249-417-11	CARBON	1K	5%	1/4W	F
R1717	1-249-432-11	CARBON	18K	5%	1/4W	
R1718	1-249-412-11	CARBON	390	5%	1/4W	
R1719	1-249-416-11	CARBON	820	5%	1/4W	
R1720	1-216-089-91	METAL GLAZE	47K	5%	1/10W	
R1721	1-249-414-11	CARBON	560	5%	1/4W	
R1722	1-216-295-91	CONDUCTOR, CHIP				
R1723	1-249-429-11	CARBON	10K	5%	1/4W	
R1724	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1725	1-249-413-11	CARBON	470	5%	1/4W	
R1726	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1727	1-249-402-11	CARBON	56	5%	1/4W	F
R1729	1-216-166-00	METAL GLAZE	47	5%	1/8W	
R1730	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R1731	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1735	1-216-049-91	METAL GLAZE	1K	5%	1/10W	
R1736	1-247-807-31	CARBON	100	5%	1/4W	
R1737	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1738	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R1739	1-216-222-00	METAL GLAZE	10K	5%	1/8W	
R1740	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R1741	1-216-166-00	METAL GLAZE	47	5%	1/8W	
R1743	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R1744	1-216-150-91	METAL GLAZE	10	5%	1/8W	
R1745	1-216-150-91	METAL GLAZE	10	5%	1/8W	
**********						
	*A-1652-042-A	T BOARD, COMPLETE (KV29K1A/29K1D/				
		********** 29K1E/29K1K/29K1R)				
	*A-1652-044-A	T BOARD, COMPLETE (KV-29K1B)				
		**********				
	*A-1652-047-A	T BOARD, COMPLETE (KV-29K1U)				
		**********				
		< CAPACITOR >				
C5002	1-165-319-11	CERAMIC CHIP	0.1MF		50V	
C5003	1-104-666-11	ELECT	220MF	20%	16V	
C5004	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	
					(KV-29K1B)	
C5005	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
					(KV-29K1B)	
C5006	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	
					(KV-29K1B)	
C5007	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V	
C5008	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V	
C5009	1-126-965-11	ELECT	22MF	20%	50V	
C5010	1-124-907-11	ELECT	10MF	20%	50V	
C5011	1-126-961-11	ELECT	2.2MF	20%	50V	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C5012	1-109-953-11	ELECT 2.2MF 20% 50V	(KV-29K1B)
C5013	1-163-023-00	CERAMIC CHIP 0.015MF 10% 50V	
C5014	1-109-953-11	ELECT 2.2MF 20% 50V	
C5015	1-165-319-11	CERAMIC CHIP 0.1MF	50V
C5016	1-104-666-11	ELECT 220MF 20% 16V	
C5018	1-163-237-11	CERAMIC CHIP 27PF 5% 50V	(KV-29K1B)
C5019	1-104-664-11	ELECT 47MF 20% 25V	
		< FILTER >	
CF5001	1-760-106-11	FILTER, CERAMIC	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
CF5002	1-567-100-00	FILTER, CERAMIC	(KV-29K1B/29K1U)
CF5003	1-760-450-21	FILTER, CERAMIC	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
		< CONNECTOR >	
CN5001	*1-568-880-51	PIN, CONNECTOR 5P	
CN5002	*1-564-509-11	PLUG, CONNECTOR 6P	
		< DIODE >	
D5002	8-719-421-57	DIODE MA73-TX	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
D5003	8-719-421-57	DIODE MA73-TX	(KV-29K1B29K1U)
D5004	8-719-421-57	DIODE MA73-TX	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
		< IC >	
IC5001	8-759-398-24	IC U2860B-BFPG3	
IC5002	8-752-072-94	IC CXA1875AM-T4	
		< COIL >	
L5001	1-408-406-00	INDUCTOR 5.6UH	
L5002	1-408-406-00	INDUCTOR 5.6UH	
L5003	1-412-751-11	INDUCTOR 18UH	(KV-29K1B)
		< TRANSISTOR >	
Q5001	8-729-920-74	TRANSISTOR 2SC2412K-T-146-R	(KV-29K1B)
Q5002	8-729-039-67	TRANSISTOR BSS83	(KV-29K1B)
Q5004	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q5005	8-729-901-01	TRANSISTOR DTC144EK-T146	(KV-29K1B)
Q5006	8-729-901-01	TRANSISTOR DTC144EK-T146	(KV-29K1B)
Q5007	8-729-920-74	TRANSISTOR 2SC2412K-T-146-R	(KV-29K1B)
Q5008	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q5009	8-729-901-01	TRANSISTOR DTC144EK	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
Q5010	8-729-901-01	TRANSISTOR DTC144EK	(KV-29K1B)
Q5011	8-729-901-01	TRANSISTOR DTC144EK	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
Q5012	8-729-901-01	TRANSISTOR DTC144EK-T146	(KV-29K1B)
Q5014	8-729-038-96	TRANSISTOR IMZ1A-T109	
Q5015	8-729-216-22	TRANSISTOR 2SA1037K-T-146-R	(KV-29K1B)
Q5016	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q5017	8-729-216-22	TRANSISTOR 2SA1162-G	
		< RESISTOR >	
R5001	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R5002	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R5004	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R5005	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R5007	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-29K1B)
R5008	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-29K1B)
R5009	1-216-643-11	METAL CHIP 470 0.50% 1/10W	(KV-29K1B)
R5010	1-216-643-11	METAL CHIP 470 0.50% 1/10W	(KV-29K1B)
R5011	1-216-643-11	METAL GLAZE 470 0.50% 1/10W	(KV-29K1B)
R5012	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-29K1B)
R5015	1-216-295-91	CONDUCTOR, CHIP	(KV-29K1A/29K1D/29K1E 29K1K/29K1R/29K1U)
R5016	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R5017	1-216-035-00	METAL GLAZE 270 5% 1/10W	
R5018	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R5020	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R5021	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R5022	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R5023	1-216-049-91	METAL GLAZE 1K 5% 1/10W	(KV-29K1B)
R5024	1-216-089-91	METAL GLAZE 47K 5% 1/10W	(KV-29K1B)
R5025	1-216-089-91	METAL GLAZE 47K 5% 1/10W	(KV-29K1B)
R5026	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R5027	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R5028	1-216-039-00	METAL GLAZE 390 5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
R5029	1-216-039-00	METAL GLAZE 390 5% 1/10W	(KV-29K1B/29K1U)
R5030	1-216-039-00	METAL GLAZE 390 5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
R5031	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
R5032	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	(KV-29K1B)
R5033	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
R5034	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R5035	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R5036	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R5037	1-216-089-91	METAL GLAZE 47K 5% 1/10W	
R5041	1-216-081-00	METAL GLAZE 22K 5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
R5042	1-216-081-00	METAL GLAZE 22K 5% 1/10W	(KV-29K1B)

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The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R5043	1-216-081-00	METAL GLAZE 22K 5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
R5044	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R5045	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
R5046	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-29K1B)
R5047	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-29K1A/29K1B/29K1D 29K1E/29K1K/29K1R)
R5048	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-29K1B)
R5052	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R5053	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R5054	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R5055	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R5056	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	(KV-29K1B)
R5057	1-216-025-91	METAL GLAZE 100 5% 1/10W	(KV-29K1B)
R5058	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R5059	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R5060	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R5061	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R5062	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R5063	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
		< TUNER >	
TU5001	1-693-338-21	TUNER/VIF (AEP)	(KV-29K1A/29K1D/29K1E/ 29K1K/29K1R)
	1-693-340-21	TUNER/VIF (FR) (KV-29K1B)	
	1-693-339-21	TUNER/VIF (UK) (KV-29K1U)	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS **********	
	⚠ 1-406-807-11	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISK; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
	⚠ 1-453-222-11	TRANSFORMER ASSY, FLYBACK	(NX-4003/U2B4)
	1-505-673-11	SPEAKER, WOOFER (10CM)	
	1-505-674-11	SPEAKER, MID-RANGE (8CM)	
	1-505-484-11	SPEAKER (2.6CM)	
	⚠ 1-251-317-31	CAP ASSY, HIGH-VOLTAGE	
	⚠ 1-571-433-21	SWITCH, PUSH (AC POWER)	
	1-693-338-21	TUNER (TUVIF) (AEP)	(KV-29K1A/29K1D/29K1E/ 29K1K/29K1R)
	1-693-340-21	TUNER (TUVIF) (FR) (KV-29K1B)	
	1-693-339-21	TUNER (TUVIF) (UK) (KV-29K1U)	
	⚠ 1-751-680-11	CORD, POWER (WITH NOISE FILTER) 2.5A/250V	(KV-29K1A/29K1B/29K1D/ 29K1E/29K1K/29K1R)
	⚠ 1-776-204-11	CORD, POWER (FILTER) (KV-29K1U)	
	⚠ 8-451-466-11	DEFLECTION YOKE (Y29GXC2B)	
	⚠ 8-453-005-21	NECK ASSY, (NA297-M2)	
V901	⚠ 8-733-856-05	PICTURE TUBE (SD-269)(M68LCT60X)	
	⚠ 8-733-856-75	ITC	

****

		ACCESSORIES AND PACKING MATERIALS **********
	1-769-175-11	CABLE ANTENNA (WITH FILTER)
	*4-203-674-01	CUSHION (LOWER) (ASSY)
	*4-203-671-01	CUSHION (UPPER) (ASSY)
	*4-203-670-01	INDIVIDUAL CARTON
	4-203-694-41	MANUAL, INSTRUCTION (KV-29K1A) (ITALIAN)
	4-203-694-51	MANUAL, INSTRUCTION (KV-29K1B) (FRENCH/SWISS/BELGIUM)
	4-203-694-11	MANUAL, INSTRUCTION (KV-29K1D) (GERMAN/DUTCH/AUSTRIAN/TURKISH/GREEK)
	4-203-694-71	MANUAL, INSTRUCTION (KV-29K1E) (SPANISH)
	4-203-694-81	MANUAL, INSTRUCTION (KV-29K1E) (PORTUGUESE/DANISH/SWEDISH/NORWEGIAN/ FINNISH/HUNGARIAN)
	4-203-694-91	MANUAL, INSTRUCTION (KV-29K1K/29K1R) (RUSSIAN/BULGARIAN/CZECH/POLISH/ SLOVINIAN)
	4-203-694-61	MANUAL, INSTRUCTION (KV-29K1U) (ENGLISH)
	*4-039-906-01	BAG, PROTECTION
		REMOTE COMMANDER **********
	1-473-692-11	COMMANDER, STANDARD TYPE (RM-862)

****

9-974-950-01

Sony Corporation
Sony UK
Service Promotions Div.

English
97IP7170-1
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SONY®

SERVICE MANUAL

AE-4 CHASSIS

MODEL	COMMANDER	DEST	CHASSIS NO.	MODEL	COMMANDER	DEST	CHASSIS NO.
KV-29K1A	RM-862	Italian	SCC-K43G-A	KV-29K1K	RM-862	OIRT	SCC-K44G-A
KV-29K1B	RM-862	French	SCC-K45G-A	KV-29K1R	RM-862	OIRT	SCC-K44H-A
KV-29K1D	RM-862	AEP	SCC-K41G-A	KV-29K1U	RM-862	UK	SCC-K46C-A
KV-29K1E	RM-862	Spanish	SCC-K42G-A				

SUPPLEMENT - 1

SUBJECT : Changes shown in below Introduction to KV-29K1R

File this supplement with the service manual

INTRODUCTION : This supplement is required to reflect changes to Russian Text, Soft Start Circuit, Macrovision Colour Flicker in PAP Mode, addition of F1 Board & PWB suffix change for A,B,D,T,G,C,VM Boards.

SECTION 5 DIAGRAMS

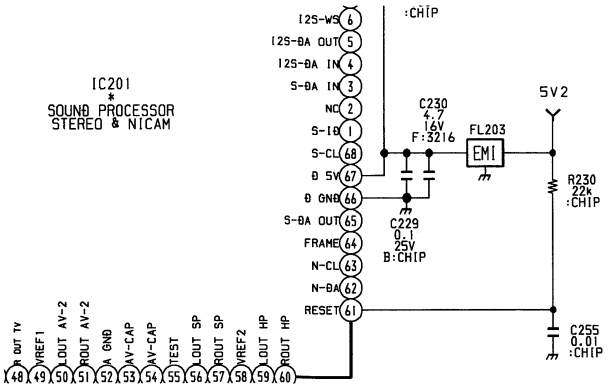
(A Board, Page 49) .....See page 2
(B Board, Page 67) .....See page 9
(D Board, Page 80) .....See page 10
(T Board, Page 61) .....See page 12
(G Board, Page 75) .....See page 13
(VM Board, Page 86) .....See page 16
(F1 Board - New) .....See page 16
(C Board, Page 57) .....See page 17

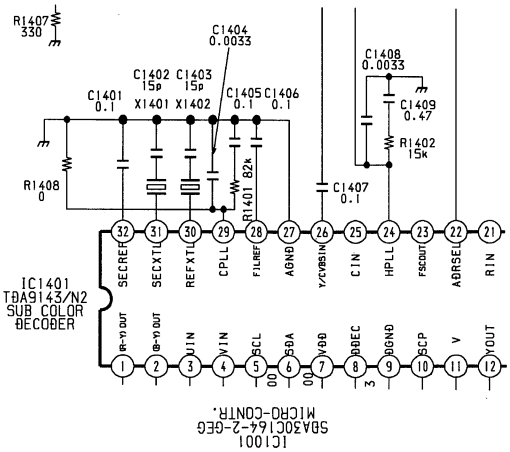
SECTION 6 EXPLODED VIEWS

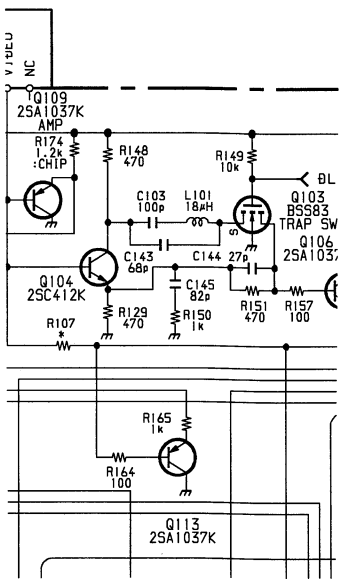
6-1.Chassis (Page 91) .....See page 18
6-2.Picture Tube (Page 92) .....See page 18

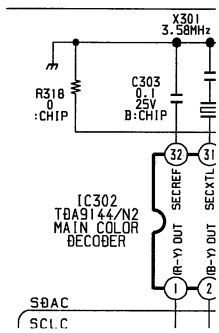
SECTION 7 ELECTRICAL PARTS LIST (Page 93).....See page 19

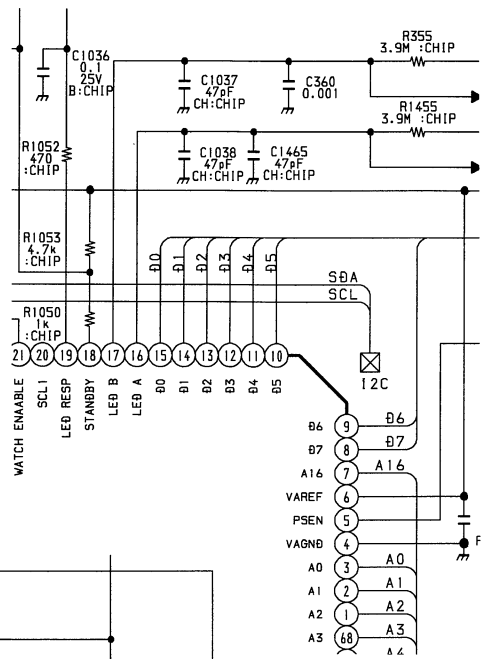
A Board

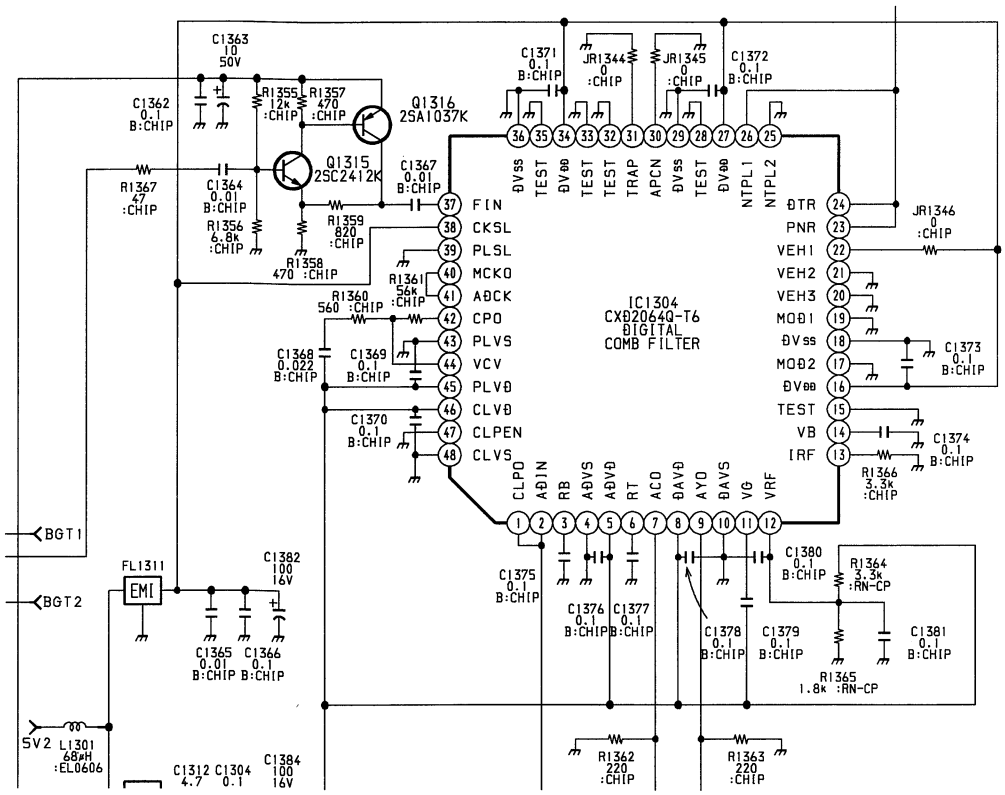

IC201
SOUND PROCESSOR
STEREO & NICAM
I2S-WS
I2S-DA OUT
I2S-DA IN
S-DA IN
S-IO
S-CL
D 5V
D GND
S-DA OUT
FRAME
N-CL
N-DA
RESET
C230 4.7 16V F:3216
FL203 EMI
5V2
R230 22k :CHIP
C229 0.1 25V B:CHIP
C255 0.01 :CHIP
:CHIP


IC1401
TDA9143/N2
SUB COLOR
DECODER
C1401 0.1
X1401
X1402
C1402 15p
C1403 15p
C1404 0.0033
C1405 0.1
C1406 0.1
C1407 0.1
C1408 0.0033
C1409 0.47
R1401 82k
R1402 15k
R1407 330
R1408 0


Q109
2SA1037K
AMP
Q103
BS583
TRAP SW
Q106
2SA1037
Q104
2SC412K
Q113
2SA1037K
R174 1.2k :CHIP
R148 470
R149 10k
C103 100p
L101 18uH
C143 68p
C144 27p
C145 82p
R129 470
R150 1k
R151 470
R157 100
R107
R165 1k
R164 100


X301
3.58MHz
IC302
TDA9144/N2
MAIN COLOR
DECODER
C303 0.1 25V B:CHIP
R318 0 :CHIP
SECREF
SECXTL
R-Y OUT
B-Y OUT
SDAC
SCLC

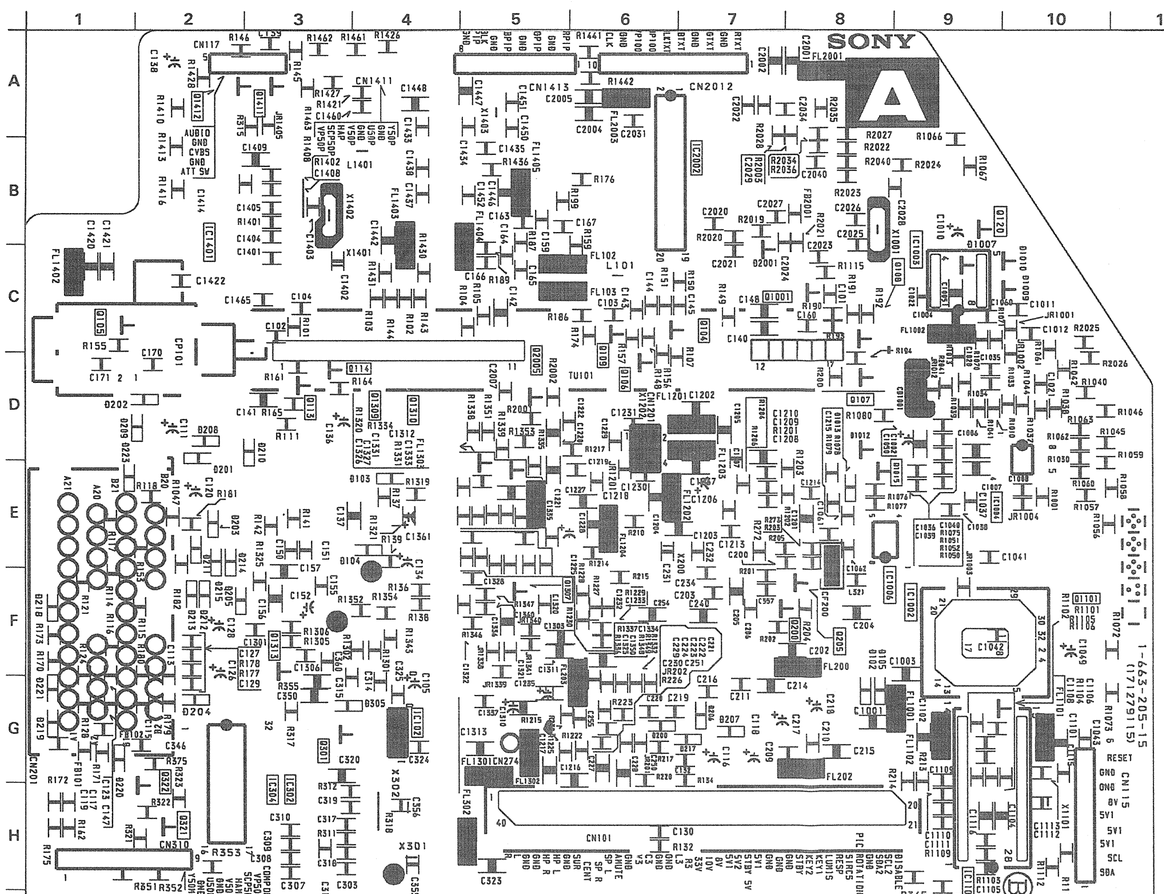

C1036 0.1 25V B:CHIP
C1037 47pF CH:CHIP
C360 0.001
C1038 47pF CH:CHIP
C1465 47pF CH:CHIP
R355 3.9M :CHIP
R1455 3.9M :CHIP
R1052 470 :CHIP
R1053 4.7k :CHIP
R1050 1k :CHIP
SDA
SCL
I2C
WATCH ENABLE
SCL1
LED RESP
STANDBY
LED B
LED A
VAREF
PSEN
VAGND


IC1304
CXD2064Q-T6
DIGITAL
COMB FILTER
Q1316 2SA1037K
Q1315 2SC2412K
FIN
CKSL
PLSL
MCKO
ADCK
CPO
PLVS
VCV
PLVD
CLVD
CLPEN
CLVS
DTR
PNR
VEH1
VEH2
VEH3
MOD1
DVss
MOD2
DVDD
TEST
VB
IRF
CLPO
ADIN
RB
ADVS
ADVD
RT
ACO
DAVD
AYO
DAVS
VG
VRF
FL1311 EMI
L1301 68uH :EL0606
BGT1
BGT2
5V2

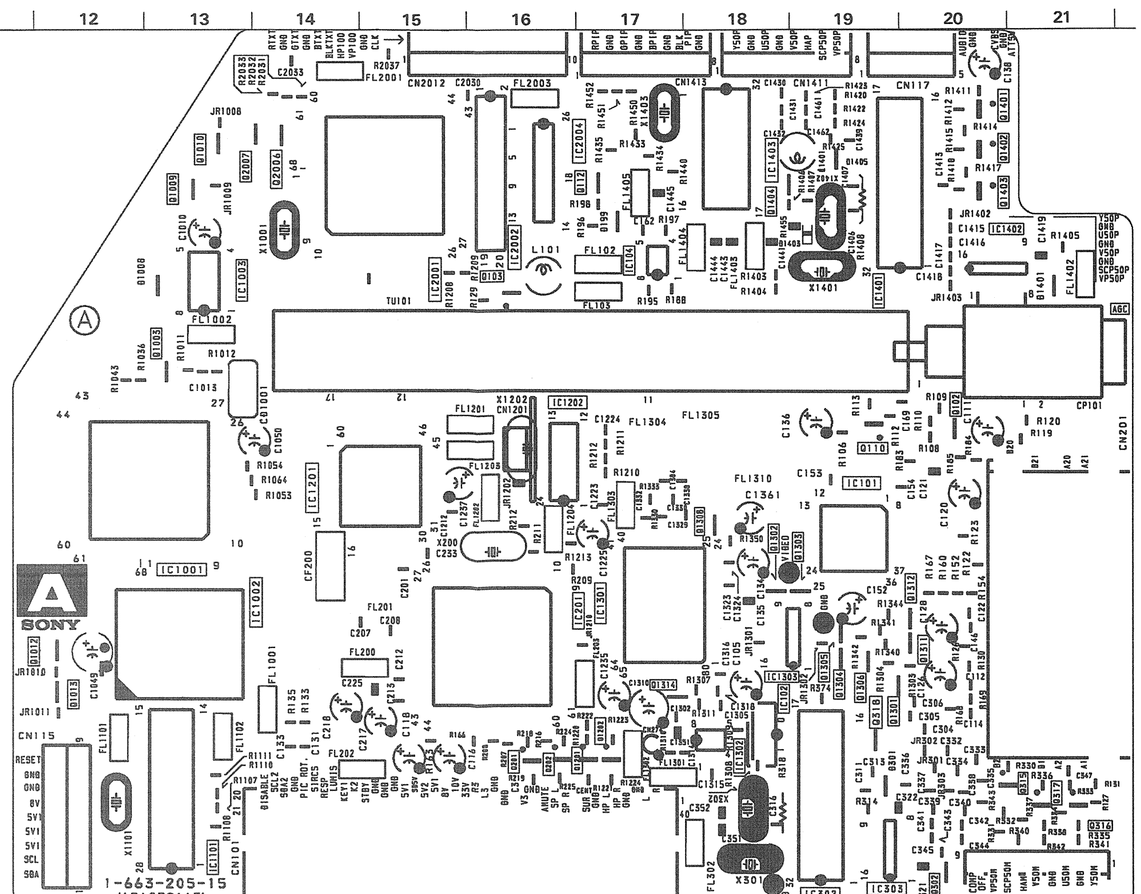
A

AV INPUT/OUTPUT INTERFACE, DIGITAL COMB FILTER, COLOR DECODER SOUND PROCESSOR, DOLBY NOISE REDUCTION, MICRO CONTROLLER, MEGA TEXT

A Board < Conductor Side >

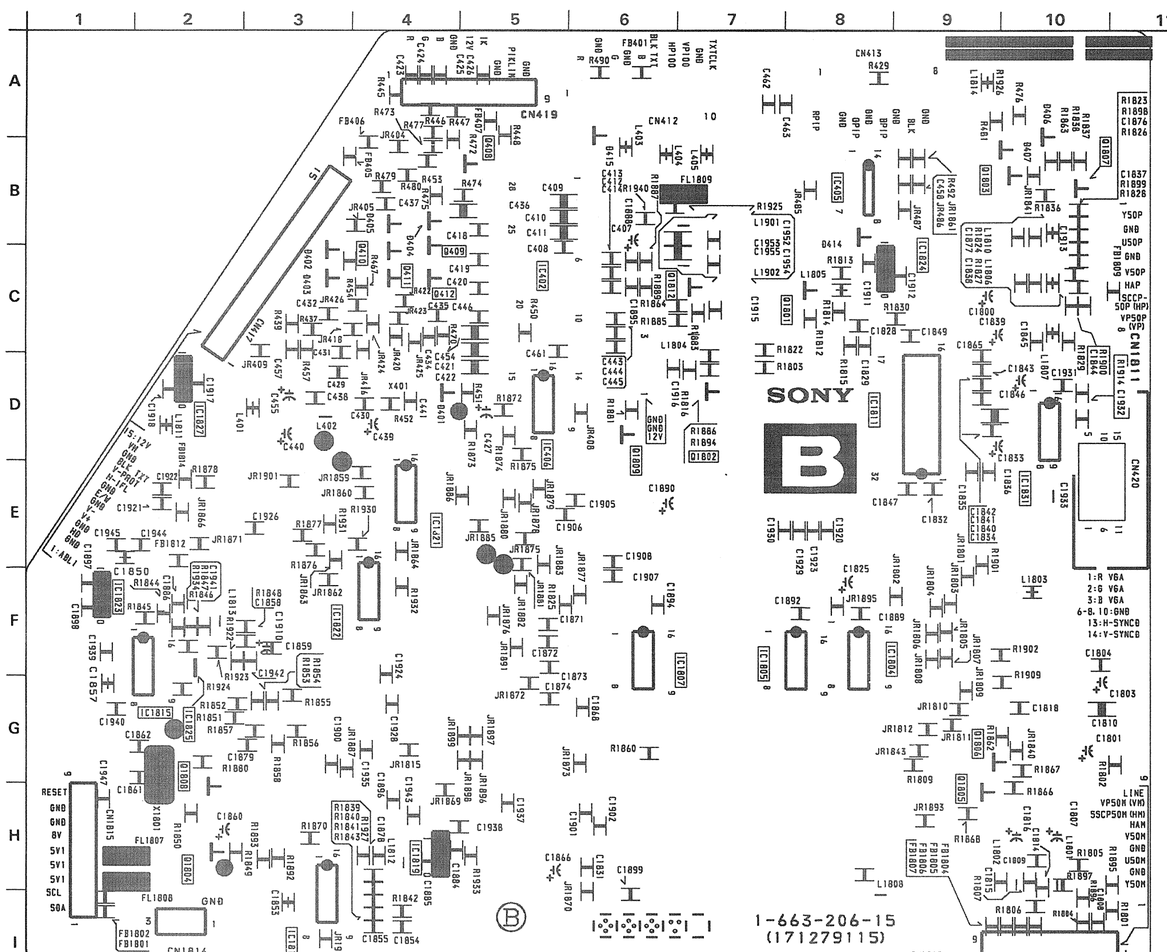


A Board < Component Side >

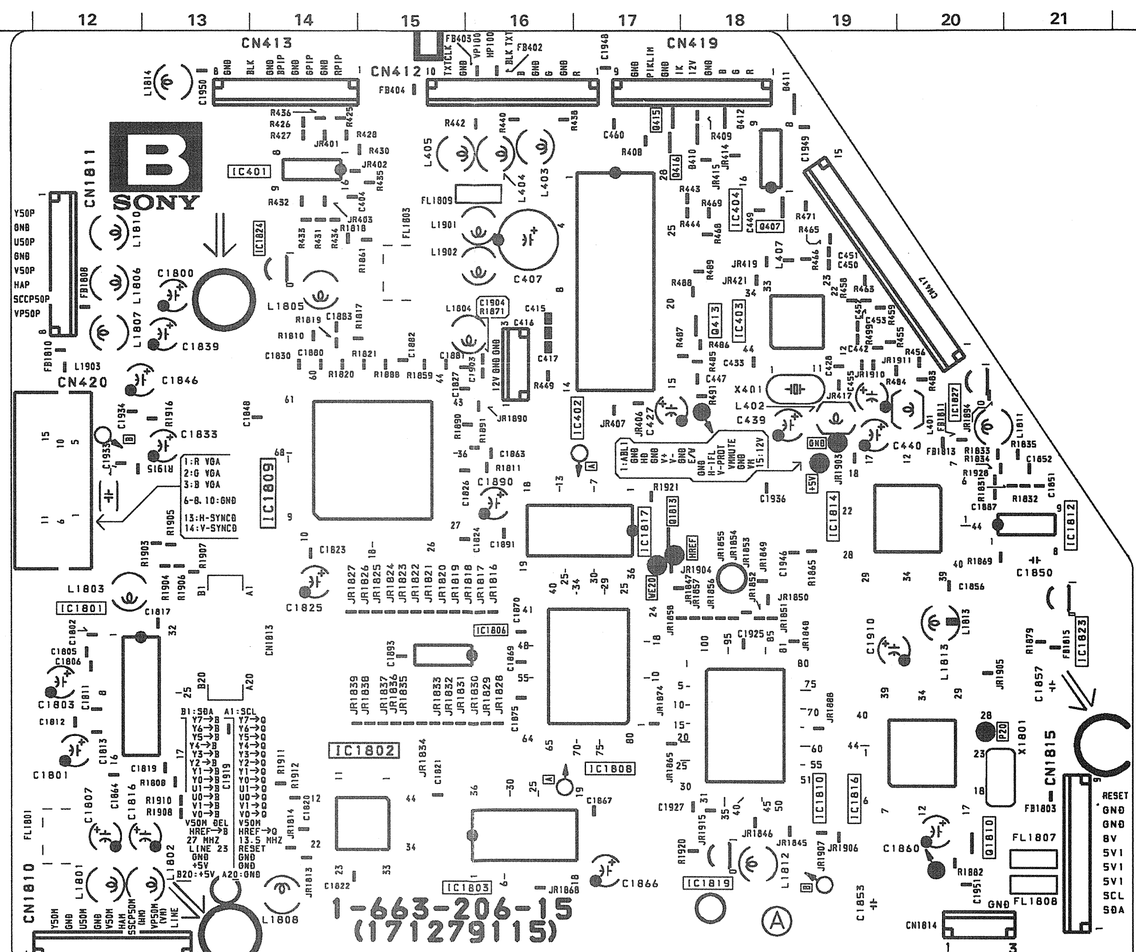


B A/D, D/A CONVERTER DIGITAL NOISE REDUCER
CRT DRIVER DEFLECTION PROCESSOR

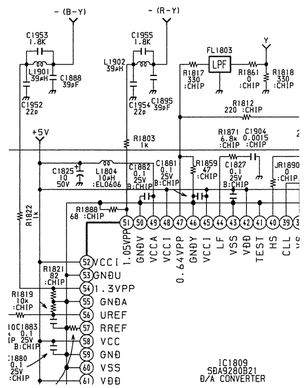
B Board < Conductor Side >

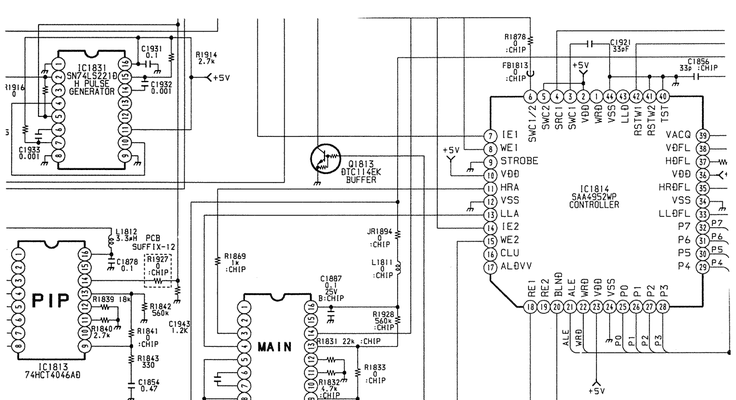


B Board < Component Side >



B Board

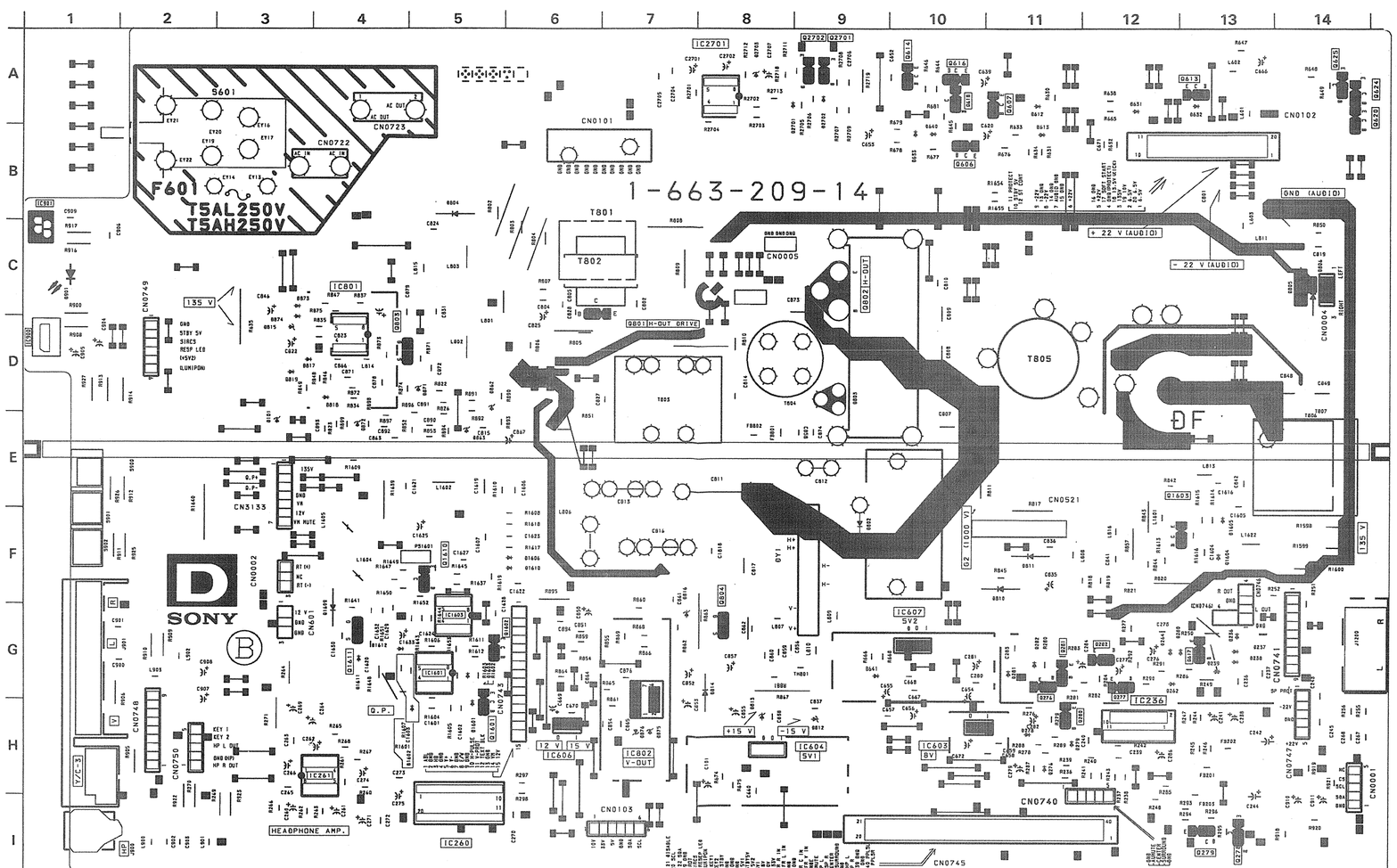




D

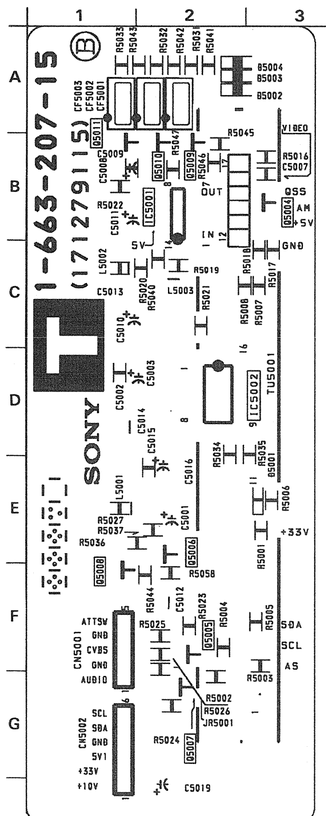
AC IN, HV OUT, PIN OUT ROTATION AMP
AUDIO VIDEO IN,HEADPHONE JACK,SIRCS
RECEIVER, FUNCTION SWITCH

D Board

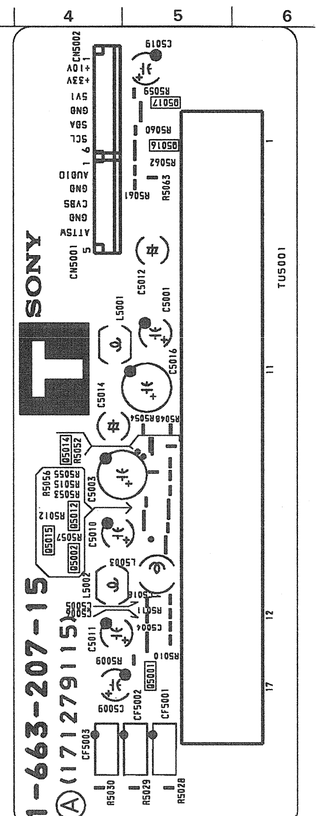


T [SUB TUNER]

T Board < Conductor Side >

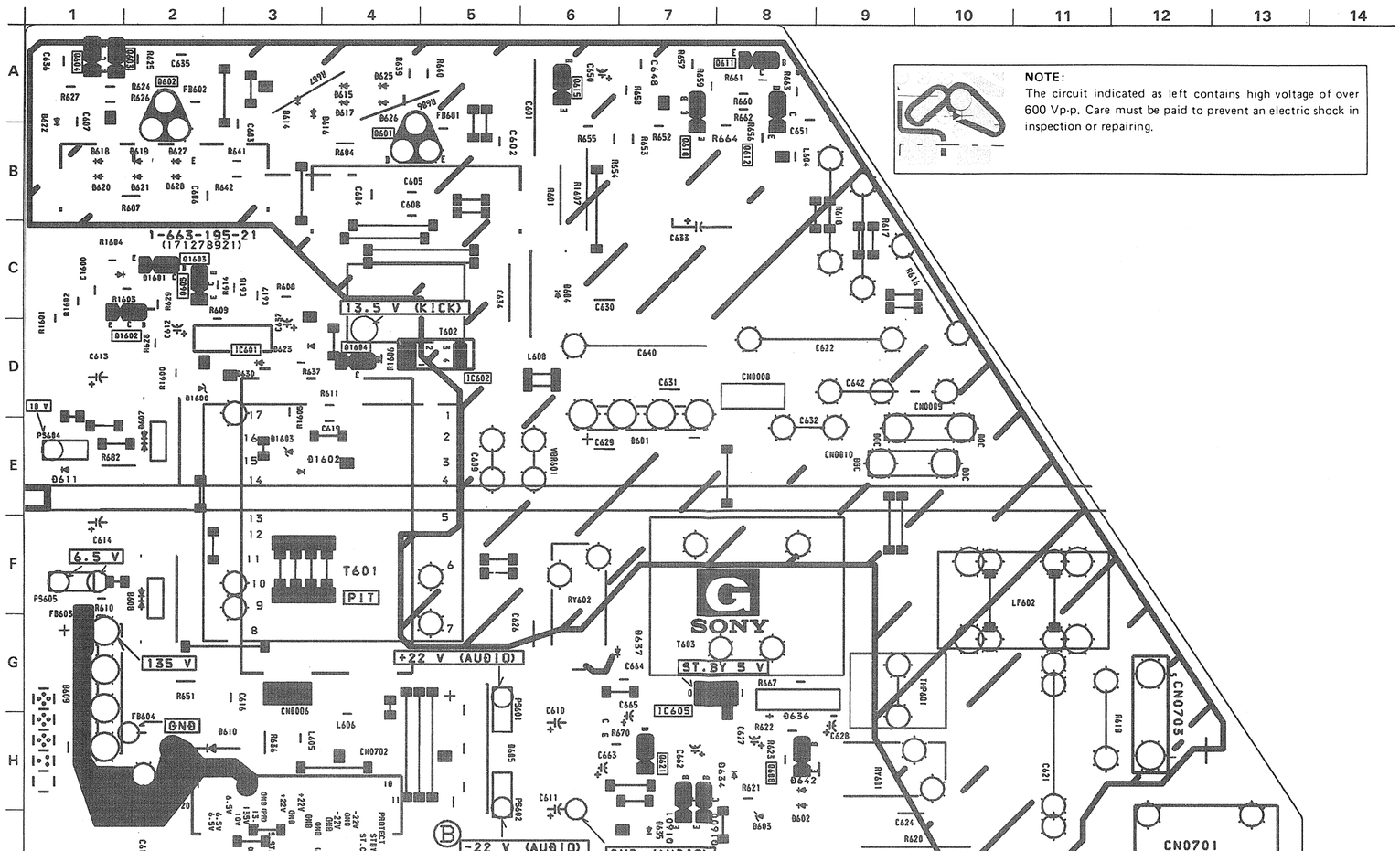


T Board < Component Side >

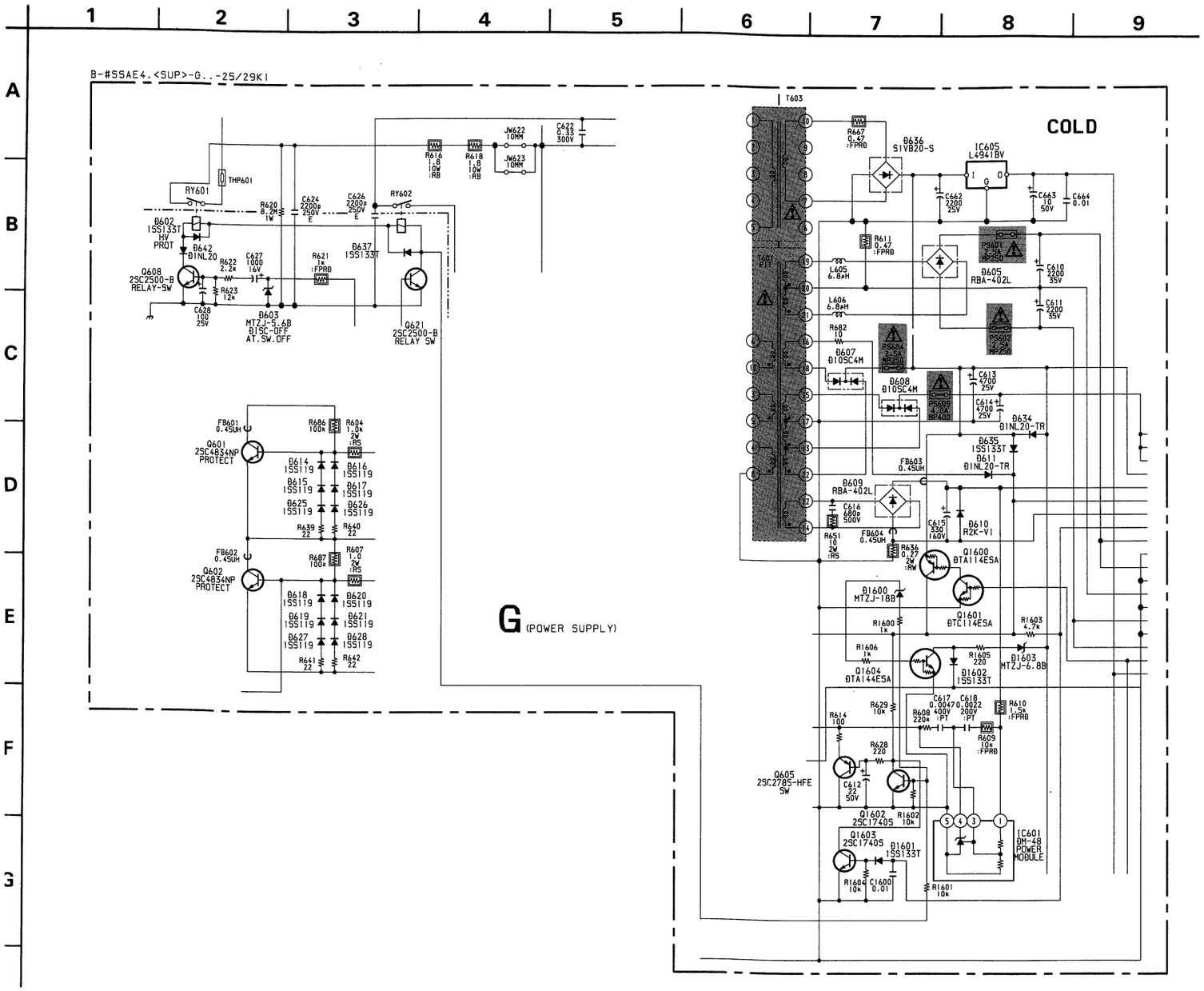


G [POWER SUPPLY]

G Board



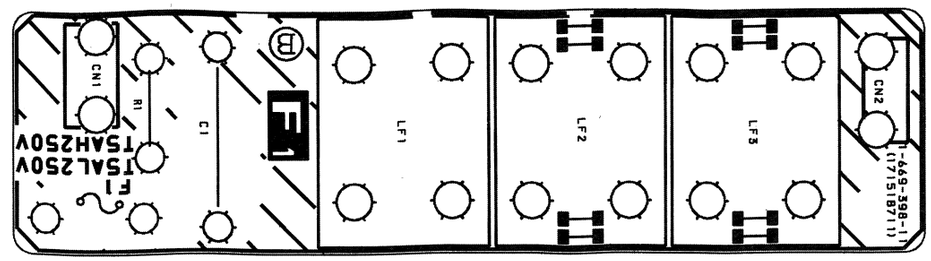
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

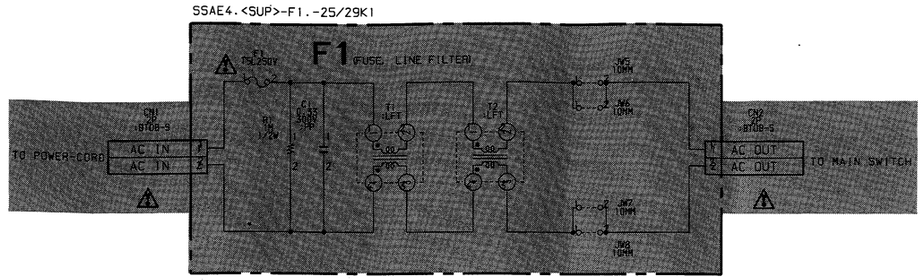


F1 [POWER SWITCH]

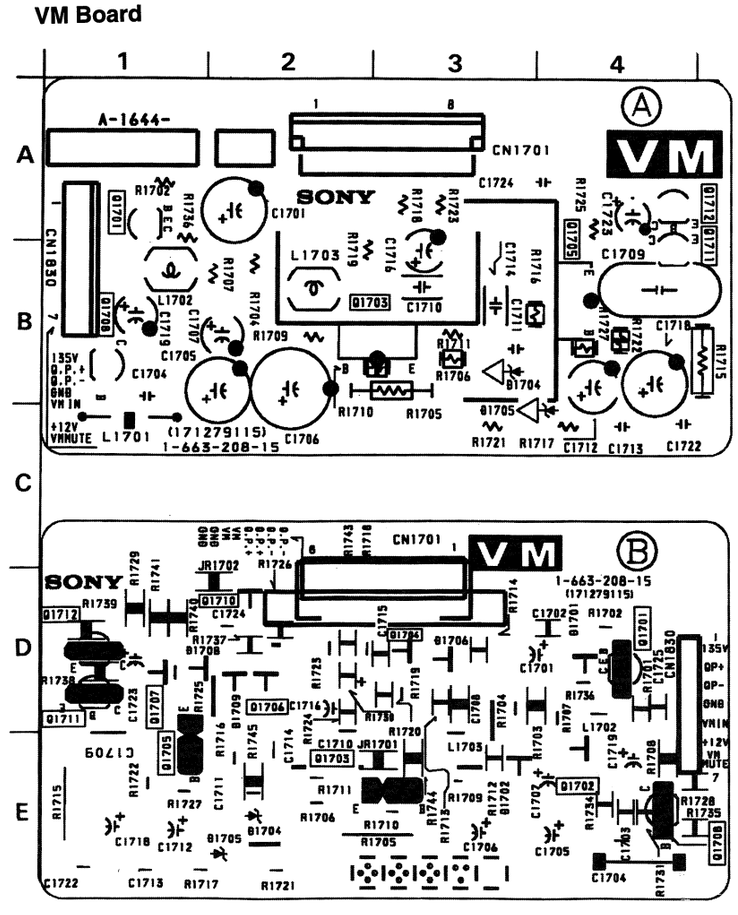
VM [VM AMP]

F1 Board



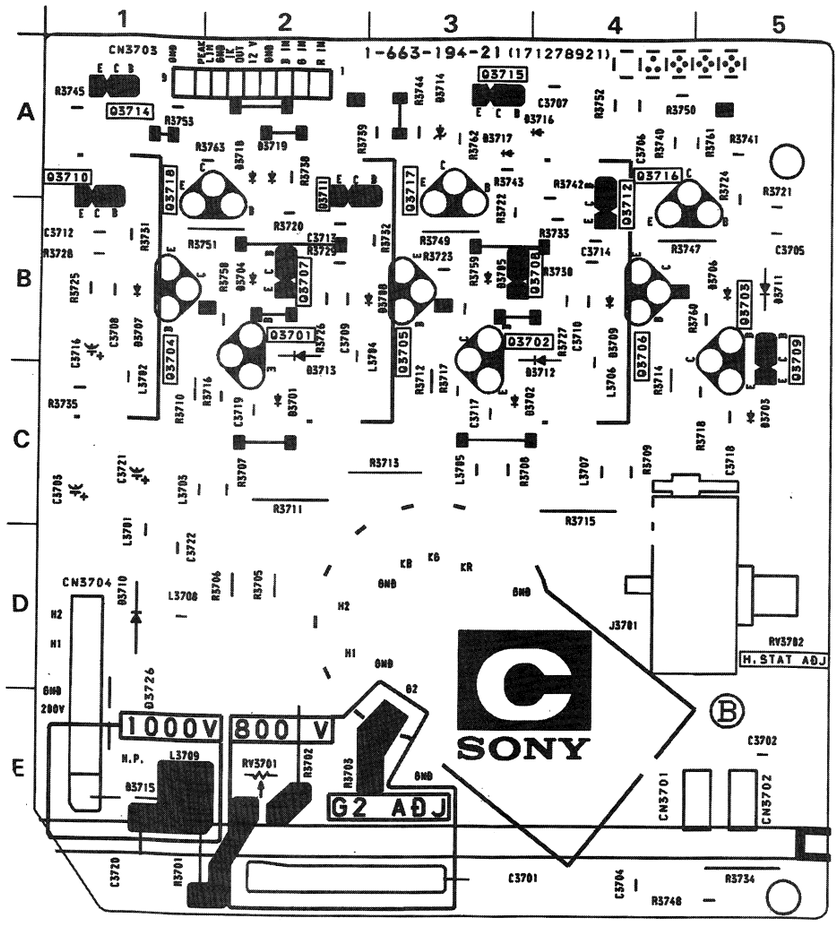


VM Board



C [R, G, B OUT]

C Board



SECTION 6
EXPLODED VIEWS

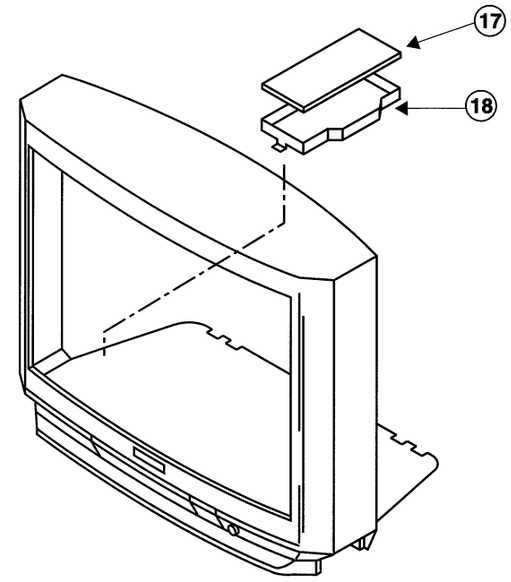
Note : Les composants indentifies par une trame et par une marque ⚠ sonte d'une importance critique pour la securite. Ne les remplacer que par des pieces du numero specifie.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part numbers specified in the parts list.

NOTE :

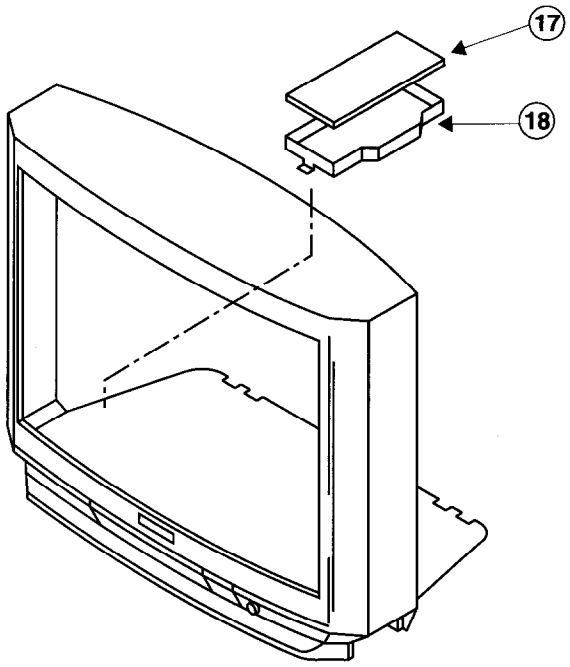
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

6-1. CHASSIS



REF. NO.	PART.NO	DESCRIPTION	REMARK
[redacted]			
13	*A-1652-048-A	T BOARD, COMPLETE (KV-29K1R)	
15	4-203-705-03	COVER, REAR	
17	*A-1624-067-A	F1 BOARD, COMPLETE (KV-29K1R)	
18	*4-204-076-11	BRACKET, F1 (KV-29K1R)	

6-2. PICTURE TUBE

REF. NO.	PART.NO	DESCRIPTION	REMARK
53	4-203-693-01	DOOR, CONTROL (KV-29K1A/29K1D/29K1R)	
70	4-203-878-01	HOLDER, D.G.C. (29")	

6-1. CHASSIS